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Checklist of the vascular alien flora of Catalonia (northeastern Iberian Peninsula, Spain)

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Abstract. This is an inventory of the vascular alien flora of Catalonia (northeastern Iberian Peninsula, Spain) updated to 2018, representing 1068 alien taxa in total. 554 (52.0%) out of them are casual and 514 (48.0%) are established. 87 taxa (8.1% of the total number and 16.8 % of those established) show an invasive behaviour. The geographic zone with more alien plants is the most anthropogenic maritime area. However, the differences among regions decrease when the degree of naturalization of taxa increases and the number of invaders is very similar in all sectors. Only 26.2% of the taxa are more or less abundant, while the rest are rare or they have vanished. The alien flora is represented by 115 families, 87 out of them include naturalised species. The most diverse genera are *Opuntia* (20 taxa), *Amaranthus* (18 taxa) and *Solanum* (15 taxa). Most of the alien plants have been introduced since the beginning of the twentieth century (70.7%), with a strong increase since 1970 (50.3% of the total number). Almost two thirds of alien taxa have their origin in Euro-Mediterranean area and America, while 24.6% come from other geographical areas. The taxa originated in cultivation represent 9.5%, whereas spontaneous hybrids only 1.2%. From the temporal point of view, the rate of Euro-Mediterranean taxa shows a progressive reduction parallel to an increase of those of other origins, which have reached 73.2% of introductions during the last 50 years. The most important way of introduction is gardening (58.0%), followed by agriculture and commerce, while forestry is marginal. Invasive taxa mainly come from gardening and trade, but the proportion of the latter that become invasive is higher (6.1% and 15.6%, respectively). Most of the established aliens are annual and perennial forbs, while other biological types are less represented. Annual and perennial forbs are also dominant among the invasive alien species, although there is a noticeable increase of trees and climbers.

Keywords: alien plants; Distribution; Western Mediterranean Region.

Catálogo de la flora alóctona vascular de Cataluña (nordeste de la Península Ibérica, España)

Resumen. En este artículo se presenta un inventario de la flora vascular alóctona de Cataluña (noreste de la Península Ibérica, España) actualizada al año 2018. El número de taxones alóctonos es de 1068, de los cuales 554 son casuales y 514 (48,0%) establecidos. 87 taxones (8,1% del total y 16,8% de los establecidos) muestran un comportamiento invasivo. La zona geográfica con más plantas alóctonas es la zona marítima más antropizada, pero las diferencias entre las regiones disminuyen cuando aumenta el grado de naturalización de los taxones y el número de invasores es similar en todos los sectores. Sólo el 26,2% de los taxones son más o menos abundantes, mientras que el resto son raros o han desaparecido. La flora alóctona está representada por 115 familias, 87 de las cuales tienen especies naturalizadas. Los géneros más diversos son *Opuntia* (20 taxones), *Amaranthus* (18 taxones) y *Solanum* (15 taxones). La mayoría de las plantas alóctonas se han introducido desde principios del siglo XX (70,7%), con un fuerte aumento desde 1970 (50,3% del número total). Casi dos tercios de las plantas tienen su origen en el área euromediterránea y Américas, mientras que el 24,6% proviene de otras áreas geográficas. Los taxones originados en el cultivo representan el 9,5%, mientras que los híbridos espontáneos sólo el 1,2%. Históricamente, el porcentaje de taxones euromediterráneos ha mostrado una reducción progresiva paralela a un aumento de los de otros orígenes, que alcanzan el 73,2% en las introducciones de los últimos 50 años. La forma más importante de introducción es la jardinería (58,0%), seguida por la agricultura y el comercio, mientras que la silvicultura es marginal. Los taxones invasores provienen principalmente de la jardinería y el comercio, pero la proporción de estos últimos que se vuelven invasivos es mayor (respectivamente 6,1% frente a 15,6%). La mayoría de los taxones alóctonos establecidos son hierbas anuales y perennes, mientras que otros tipos biológicos están menos representados. Las hierbas anuales y perennes también son dominantes entre las especies exóticas invasoras, aunque se observa un aumento notable de árboles y de plantas trepadoras.

Palabras clave: plantas alóctonas; distribución; región mediterránea occidental.

Introduction

Biological invasions are a global phenomenon and comparison of geographically distant regions and their introduced biota is a crucially important methodological approach for elucidation of the determinants of invasiveness

and invasibility (Pyšek *et al.*, 2004). Our understanding of the general patterns of plant invasions substantially improved by means of comparative studies, such as checklists of exotic floras. Catalonia (northeastern Iberian Peninsula, Spain), has a native flora of 3745 taxa (species and lower taxonomic levels, incl. hybrids) (authors, unpublished data).

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In the Mediterranean region, Catalonia has the singularity of having experienced an important industrialization since the nineteenth century, a factor that favoured intense trade by sea and land and, later, a strong urbanization of some parts of the territory. These changes have favoured conditions for the penetration of non-native flora. Another singularity in the Mediterranean area –also shared with some regions in southern France– is the beginning of botanical studies in the 17th century and its continuity since the 19th century, which has provided a good floristic knowledge over the last 150 years. As a result of these studies, three regional flora compilations have been published (Costa, 1877; Cadevall & Font Quer, 1913–1937; Bolòs & Vigo, 1984–2001). The flora of Catalonia has also been recently covered by *Flora iberica* project (Castroviejo, 1986–2018), which is not yet concluded.

All these floristic works also included data on allochthonous plants, although without any particular attention. Casasayas (1989), in the first and so far only synthetic work on alien plants in Catalonia, listed 461 taxa. Catalonia is also a part of the territory considered in the synthesis of the Spanish alien flora (Sanz *et al.*, 2004), with a number of 845 species (Canary Islands excluded). The interest for allochthonous species has notably increased in the last decade, period in which the knowledge about escaped ornamental species has been noticeably improved. In the last years, the regional administration also promoted a database of exotic species in Catalonia that includes about 700 vascular plant taxa, dated on 14th June 2019 (http://exocatdb.crea.cat/base_dades/).

In this paper, the checklist of alien plant taxa in Catalonia is updated by incorporating new data accumulated in the last decades, reassessing the status of taxa resulting from improved knowledge. Moreover, the trends in the alien flora of Catalonia are analysed and compared to those of other areas in Europe.

Methods

The study area

Catalonia is a territory with an area of 32,108 km² (data from <https://www.idescat.cat/>) located in the north-eastern Iberian Peninsula, Spain (Figure 1), between the Pyrenees Range and the Mediterranean Sea. The resident population is about 7.5 million inhabitants and the most important city is Barcelona. As for the whole of the Mediterranean area, the human influence on the landscape and vegetation is intense and ancient, with a high agricultural land-use for at least 3000 years.

Three major sectors with different natural and anthropic conditions are recognized:

a) Littoral area: northeast-southwest strip between the Mediterranean Sea and the Catalan Coastal Range, with a width of 30–50 km and an area of about 14000 km². The altitudes are generally less than 500 m asl, but they can reach more than 1500 m asl in some mountain areas. The climate and the vegetation are of Mediterranean type, from subarid to humid. The annual rainfall average is 400–600 mm in the southern

half and 600–800 mm in the north, and exceeds 1000 mm in some mountains. This is the most populated sector in the studied area, in which the main cities are concentrated, and has a very high population density, c. 2,000 hab./km² in the central part (metropolitan area of Barcelona) and generally 100–200 hab./km² in the rest, although in the extreme south it falls to 50 hab./km². A very large part of the surface is urbanized, but there are still important agricultural extensions and the mountains are mostly covered by woods and bushland. Most of the strict coastal strip was built between 1960 and 2000, for residential and tourist use, and has become an extensive suburban area.

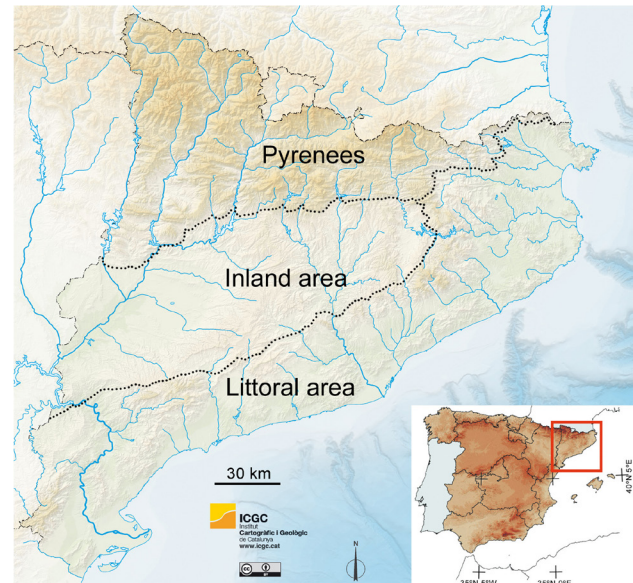


Figure 1. Map of the studied area divided in its three main geographical regions.

b) Inland area: Low and medium altitude lands (100–700 m asl, rarely up to 1000 m asl) located to the west of the Catalan Coastal Range. It is an area of about 10000 km² that is part of the large river Ebro Depression. The climate is Mediterranean, from subarid to subhumid, with a continental trend and an average rainfall from 350 mm (west) to 700 mm (east). The vegetation is of Mediterranean or sub-Mediterranean type, but historically it dramatically changed as a result of the heavy agricultural use of the territory that, at the moment, still occupies the greater part of the area. The average density of the population is about 70 hab./km², higher in the eastern sectors (100–150 hab./km²). Urban areas occupy a small percentage of the area.

c) Pyrenees: Catalan part of the Pyrenean Range, to the north of the territory and with an area of about 8000 km². It is a mountain area with an altitude generally higher than 1000 m asl and up to a maximum of 3140 m asl. The climate is of Mediterranean mountain type, with the exception of the NW extreme where it is Atlantic. Rainfall is generally 800–1200 mm (but only 600–700 in some inland valleys). Natural and semi-natural vegetation occupies most of the area and is generally extra-Mediterranean (sub-Mediterranean, Eurosiberian or Alpine). Historically, the valleys were very populated,

but much of the population left in the second half of the 20th century and nowadays the densities are low (5–30 hab./km²), but there is a high residential houses and tourist movements.

Data source and taxonomic backbone

The data were obtained between 2013 and 2018, as a result of the process of elaboration of the Checklist of the flora of Catalonia (authors, unpublished data). The basis for the checklist is all published literature on plants from the studied area, which are mostly included in databases (especially the Banc de Dades de Biodiversitat de Catalunya: <http://biodiver.bio.ub.es/biocat>). In addition, herbarium material was revised and field research undertaken. The Euro+Med PlantBase serves as a taxonomic standard and backbone (with some exceptions) for this study. The taxonomic circumscription of the families follows PPG I (2016) for lycophytes and ferns, Christenhusz *et al.* (2011) for gymnosperms and APG IV (2016) for angiosperms.

Relative abundance

The current frequency of each taxon in Catalonia was assessed according to the following five categories (ranked by increasing order of abundance):

Vanished (V): taxa not recorded for >50 years.

Rare (R): <5 known localities.

Scattered (S): few localities (typically <20) and locally scarce.

Locally abundant (L): few known localities but locally abundant.

Common (C): widespread and often locally abundant.

Definitions and degree of naturalization

We consider as alien plants those which arrival to Catalonia has been man-mediated, proven or inferred, in any historical time, or which have arrived to our area without the help of people from a nearby area in which they are alien. We do not consider as alien plants those that apparently arrived by natural long-distance dispersal (especially bird-dispersed aquatic plants).

The alien taxa have been differentiated into three groups, depending on the degree of implantation in the studied area:

Casual: Taxa that do not form self-sustaining populations. Generally they are represented by a few individuals that are observed in a short period of time, but in some cases they can also establish temporary populations that do not have mid-term continuity.

Naturalised: Taxa that form populations apparently self-sustaining at mid-term, without direct intervention by people, or despite human intervention, in any of these two cases: 1) These populations are limited to anthropogenic habitats; 2) Populations are established in (semi)natural habitats, but much localized and they do not show a significant expansion. This category includes the taxa that usually occur in cultivated fields, some of which have been present for centuries (archeophytes).

The naturalised populations are generally self-sustaining by sexual reproduction, but in some cases their persistence and expansion is only by vegetative multiplication.

Invasive: Taxa that have become naturalised and, in a second phase, have shown a clear expansive tendency in (semi)natural habitats of the territory, where they compete with the native flora. The attribution of this category in a functional-ecological sense does not imply that these plants are invasive species in the sense of IUCN (2000).

The categories of naturalised and invasive taxa form the group of established alien plants which can also be qualified as naturalised in a broad sense. They are already integrated into the flora of the territory or have a high probability of integration at mid-term.

Attribution to the categories produced some uncertainties which were resolved as followed:

a) A specific taxon can have a different behaviour in several parts of the territory (e.g. invasive in one area but only casual in others); in this case, the highest observed category is assigned to the whole of the territory.

b) For some species it is unclear if they are relics of cultivation or garden escapes; in such cases, they have been included if they show long-term persistence (typically >20 years) after garden abandonment.

c) As elsewhere in the Mediterranean basin, it is often uncertain whether or not species that are present for centuries and currently basically linked to crops, are part of the native flora; the criterion adopted has been to consider as alien those that are only exceptionally observed outside of crops or other anthropogenic habitats; these plants basically correspond to what has traditionally been called archaeophytes, which may have been underestimated by the adopted criteria. Some examples of this problematic situation correspond to plants that usually occur in anthropic habitats but that often can also appear in natural or semi-natural habitats (*Bunias erucago*, *Descurainia sophia*, *Diplotaxis erucoides*, etc.).

Residence time

A period of introduction (well known or inferred) has been assigned to each species:

Before 1500 AD. Period previous to large intercontinental trade, in which short distance trips predominated and plant imports came basically from Europe, the Mediterranean region and the Near East.

Between 1500 and 1900 AD. Period during which intercontinental trade became frequent and increased plant imports from oversea countries. The economy was still mostly based on agriculture, but in the 18th and 19th centuries an industrialization process began and there was a significant population increase.

Between 1900 and 1970 AD. A period of deep transformation of the territory, characterized by a strong industrialization, a very high population increase due to various migratory waves, its gradual concentration in urban areas near Mediterranean sea and the abandonment of the mountain areas.

After 1970 AD. Period in which some previous tendencies have been exacerbated, especially: a) Coastal urbanization, which became a nearly continuous urban-suburban landscape. b) A very high increase in the frequency of long-distance trade and intercontinental voyages.

Considering that the botanical knowledge of the territory is only accessible for the last 100–150 years, information on introduction time is almost nihil for the species arrived before 1900. Between 1900 and 1970 the floristic information much increased, but the attention for alien species was still limited, particularly for the casual taxa and the garden escapes. After 1970 the interest for allochthonous flora increased and data became more precise.

Geographic origin

Taxa have been classified according to their geographic origin (native range). One (or more) of these geographic origins are assigned to each alien taxa:

Mediterranean (ME): Lowlands and mountains of the Mediterranean Basin (S Europe, N Africa, SW Asia).

Western Palearctic (WP): Europe and W Asia (Mediterranean Basin excluded).

Eastern and Southern Asia (AS): Temperate, subtropical and tropical areas, from Japan to India.

Tropical Africa (AF): African continent without Mediterranean and Cape regions.

South Africa (CA): Mainly plants of the Cape floristic region, but also from other regions of the Republic of South Africa. This group has been separated from the previous (AF) due to its singularity and because it is especially well represented in the studied area.

Australasia (AU): Mainly Australia and New Zealand.

(Sub)Tropical Regions (TRO): Taxa widely distributed throughout tropical and subtropical regions in more than one continent.

North America (NA): North American subcontinent south to Mexican plateau.

South America (SA): Central and South America.

Cultivated (Cult): Taxa of anthropogenic origin, domesticated species and artificial hybrids.

Spontaneous hybrids (Hyb): Hybrids or hybridogenous species that spontaneously originated in Europe with at least one alien parental species.

Introduction pathways

Four main introduction pathways are distinguished. The form of introduction is not more concise because in many cases knowledge is limited, especially for plants arrived before 1970.

Agriculture (A): Plants associated with the crops, introduced voluntarily to cultivate them or involuntarily as weeds.

Gardening (G): Garden plants. This category also includes some unusual orchard crops and some species used for “environmental restoration” in public works and aquarium species.

Forestry (F): Trees planted in forested areas, with the aim of timber production or for other purposes.

Trade (T): Taxa that involuntarily arrived due to the transport of seeds mixed with goods.

Intentionality of introduction

A distinction is made between deliberate (D) or accidental (A) introductions. The taxa deliberately introduced are those that have been transported to Catalonia or the neighbouring areas voluntarily by man, usually for their use as crops, ornamental plants or other aims. The taxa accidentally introduced are those that have arrived involuntarily, generally by transport of seeds mixed with goods.

Life history

Only for the established alien species, we have assigned the plant growth form according to ten categories: annual grasses (AG), annual forbs (AF), perennial grasses (PG), perennial forbs (PF), bulbous monocots (BU), aquatic plants (AQ), climbers (CL), succulent plants (SU), shrubs (SH) and trees (TR). These categories follow those used in the synthesis of Pyšek *et al.* (2017), with the addition of the bulbous and the succulent.

Results and Discussion

Diversity of the alien flora, frequency of the taxa and degree of naturalization

The known alien flora of Catalonia is constituted of 1068 taxa at the species and subspecies levels, including those of hybrid origin (Appendix 1 and Table S1 in Supplementary Material). This represents more than twice that of the first synthesis of the Catalan alien flora (Casasayas, 1989). It also increases by 50 % the number of alien plants officially recognized by the Catalan administration which includes about 700 vascular plant taxa, dated on 14th June 2019 (http://exocatdb.creaf.cat/base_dades/). We excluded from the list uncertain autochthonous taxa, which could be either alien (archaeophytes) or native plants.

In the European context, the number of taxa in Catalonia is situated in the upper range of the alien flora recorded in medium or large administrative territories (Lambdon *et al.*, 2008), but it is far from the 1,969 taxa from Belgium (Verloove, 2006) with an extent similar to that of Catalonia.

Compared to other regions of the Mediterranean basin with a medium extent, the number of aliens detected is clearly higher than in Valencia in the Iberian Peninsula (663 taxa: Sanz *et al.*, 2011), the island of Sardinia (541: Podda *et al.*, 2012) or, in the Italian Peninsula, Lombardy (619: Banfi & Galasso, 2010), Veneto (539: Masin & Scortegagna, 2012) or Tuscany (597: Arrigoni & Viegi, 2011). It also far exceeds the data for Portugal as a whole, with an area three times larger but only 772 alien taxa (Domingues de Almeida, 2018). This result points to a high regional concentration of alien plants, although data from the different territories

can not be fully compared. High diversity is probably linked with the ecological heterogeneity of the territory, to its intense anthropization and, also, to the relatively good knowledge of the local flora since the nineteenth century. Surprisingly, the number of alien taxa is much higher than that of Eastern Mediterranean countries: 387 in Greece (Bazos, 2017) or 340 in Turkey (Uludağ *et al.*, 2017). This contrast between the two ends of the Mediterranean basin would be explained mainly by three factors: i) many alien taxa of Mediterranean origin found in the western Mediterranean region are native to the eastern Mediterranean, ii) the urbanization intensity of the territory is earlier and higher in the west than in the east, iii) a weaker and more recent floristic prospection in the eastern Mediterranean region.

The relative frequency of most taxa is low or very low. Half of them are rare (536 taxa), that is, they have been observed in less than five sites. Another 197 taxa have been classified as scarce because they have been detected in a higher number of sites but always in low number of individuals. It is assumed that the 55 taxa that are considered vanished were also rare or scarce in the past. The locally abundant species, restricted to few places, are 110 and, finally, 170 are considered common because they have a wide regional distribution and a large number of individuals. Overall, taxa that have achieved a major implantation in the territory (common + locally abundant) are 26.2 % and those that show little colonization success (rare + scarce + vanished) 73.8 %.

Regarding the degree of naturalization, about half of the known taxa (554) are casual aliens, 427 are considered

naturalised and 87 invasive. The established aliens (naturalised + invasive) are 513, 48.0 % of the recorded taxa. This percentage is lower than that for the whole of Europe (65% according to data from Lambdon *et al.*, 2008), but very similar to the 49.5% recently obtained in Italy (Galasso *et al.*, 2018). The ratio of established aliens that have become invasive in Catalonia is 16.8 %, lower than in the Italian results (27.9%).

Established alien plants represent 12.0% of the whole currently known flora of Catalonia, which includes 4,259 taxa (at the species and subspecies levels, hybrids included) without taking into account casual alien taxa. This percentage is close to the average of 10% indicated by Pyšek *et al.* (2017) for temperate and Mediterranean zoniobiomes in the continental areas of the Old World, although there are important differences between regions.

Regarding the geographical distribution pattern, the alien taxa are clearly more abundant in the littoral area (933 taxa) than in the inland area (439) and the Pyrenees (407) (Figure 2). This distribution is not surprising because the maritime fringe is the most anthropogenic area and with a more intense trade, factors that favour the arrival of new alien species and their establishment in anthropised environments. But this important difference between regions in the total number of alien taxa decreases if only established aliens are considered and it is very weak if the numbers of invasive species are compared (Figure 2). These data suggest that casual aliens take advantage of the opportunities offered by the most disturbed areas, but that natural and semi-natural habitats show a similar resistance to alien colonization throughout the territory.

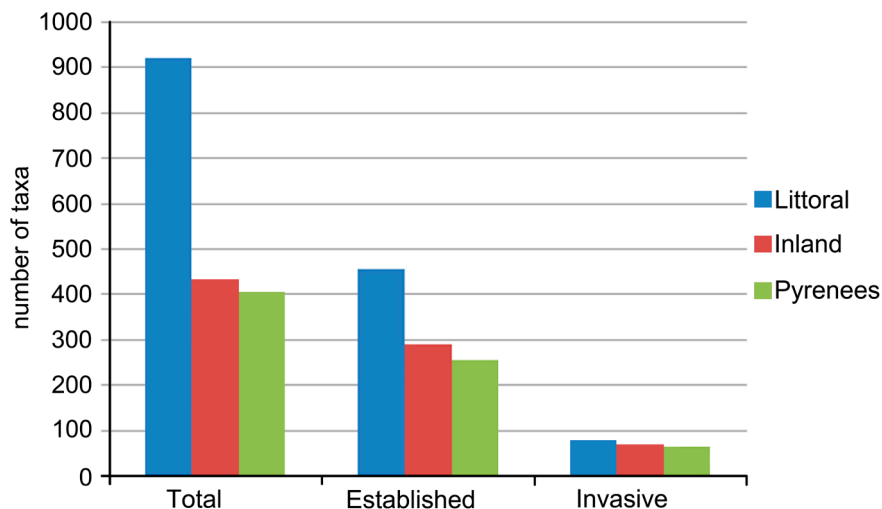


Figure 2. Number of alien taxa (total, established and invasive) in the geographical regions recognized in this study (Littoral, Inland and Pyrenees).

Taxonomic diversity

There are 115 families represented in the alien flora of Catalonia, including 1 lycophyte, 3 fern and 2 gymnosperm families. The number of families is less than half of the 213 registered in Europe (Lambdon *et al.*, 2008).

Thirteen families are represented by 20 or more taxa (Figure 3). The most diverse families are Asteraceae,

Poaceae, Fabaceae, Rosaceae and Brassicaceae, same across the whole of Europe: (Lambdon *et al.*, 2008). There are ten genera with 10 or more taxa: *Opuntia* (20), *Amaranthus* (18), *Solanum* (15), *Agave* (14), *Euphorbia* (12), *Cotoneaster* (11), *Vitis* (11, 7 out of them are artificial hybrids), *Aloe* (10), *Cyperus* (10) and *Vicia* (10). Some of these genera, such as *Amaranthus* and *Solanum*, are among the most diversified in the whole European alien flora (Lambdon *et al.*, 2008), but the

high diversity of *Opuntia* or *Agave* is a peculiarity that is related to the dry climate. On the other hand, the most

diverse alien genus in temperate Europe, *Cotoneaster* (75 taxa), is scarcely represented in Catalonia.

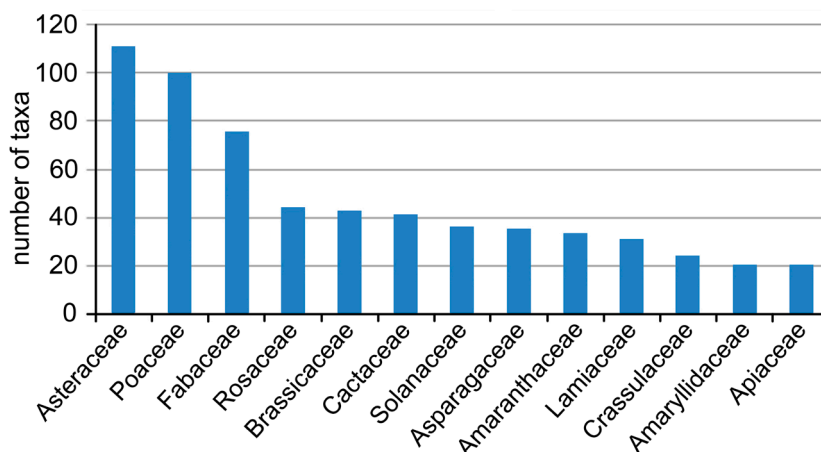


Figure 3. Families with the highest diversity of alien taxa in the Catalan flora.

The established aliens (naturalised + invaders) are included in 87 families. The most diversified families, with 10 or more taxa, are fourteen (Figure 4). These families and their order largely coincide with those that are most represented in the whole Catalan alien flora, but Euphorbiaceae, Aizoaceae and Onagraceae are included in the top ranking of those established, while Lamiaceae

and Amaryllidaceae are not. The most diversified genera within the established aliens, with 5 or more taxa, are: *Opuntia* (15), *Amaranthus* (10), *Euphorbia* (10), *Cyperus* (8), *Agave* (7), *Oenothera* (7), *Oxalis* (7), *Cotoneaster* (6), *Senecio* (6), *Solanum* (6), *Erigeron* (5), *Lepidium* (5), *Vicia* (5) and *Vitis* (5).

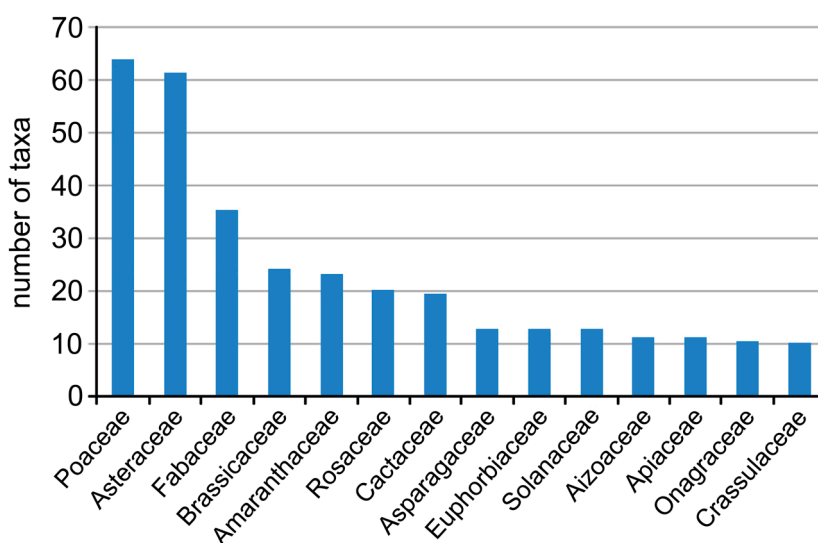


Figure 4. Families with the highest diversity of alien established taxa in the Catalan flora.

If we consider exclusively invasive species, the taxonomic diversity is reduced to 34 families. Only five out of them are represented by at least five taxa: Asteraceae (16), Poaceae (11), Amaranthaceae (7), Cactaceae (6) and Onagraceae (5). There are only three genera with five or more invasive taxa: *Amaranthus* (6), *Opuntia* (5) and *Erigeron* (5).

Residence time

The introduction time of the alien plants is estimated to be earlier than 1500 AD for 106 taxa. 207 taxa were

introduced during the period 1500–1900, 218 taxa in the period 1900–1970 and 537 after 1970. A clear increase of introductions is observed after 1900, and especially in the last 50 years, with a temporary pattern similar to that for the whole of Europe (Pyšek *et al.*, 2009). Taxa introduced after 1900 represented 70.7 % and that introduced after 1970 represent 50.3 %. This increase is probably genuine, but its extent is not well known, because the data prior to 1900 are deficient and the introductions could be underestimated, especially for casual aliens.

The percentage of taxa introduced in ancient times (archaeophytes) is 9.9 %. This rate is almost the same

to that obtained for Italy, 9.8 % (Galasso *et al.*, 2018). If we consider that there are 30 doubtful archaeophytes not incorporated into the list of alien plants, their percentage could rise to 12.7 %.

Geographic origin

The geographical origin of the alien flora is diverse (Figure 5). One third comes from geographically nearby areas, located in the Mediterranean basin (19.7% of

taxa) and other regions in Western Palearctic (12.4%). Another third is of American origin (17.5% in South America, 15.1% in North America). The plants from Asia and South Africa (10.8 and 7.5%) also have an outstanding participation, while those from tropical Africa, Australasia and Pantropicals do not reach 5%. The group of taxa artificially generated as crops or garden plants in different areas and times (9.5%) is also well represented. The taxa with spontaneous hybrid origin are negligible (1.2%).

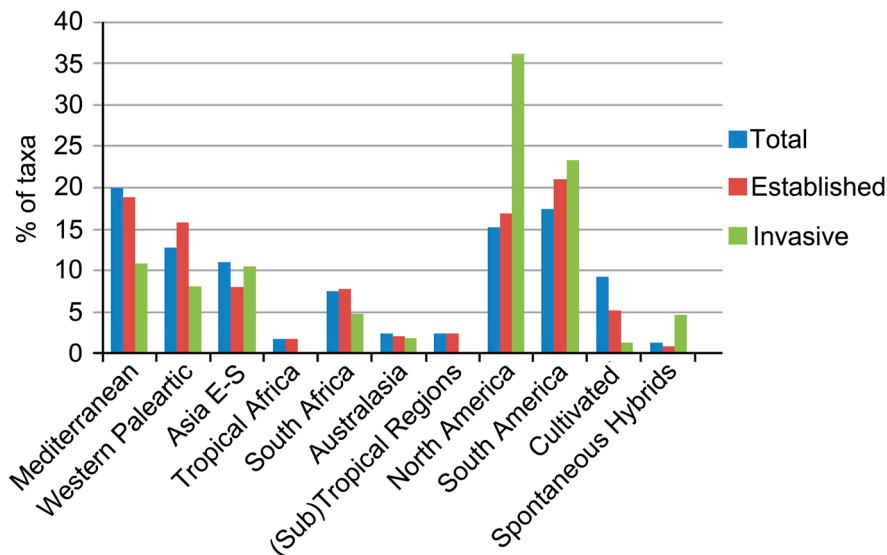


Figure 5. Proportional contribution of the world regions (and taxa originated through hybridization) to the alien flora of Catalonia.

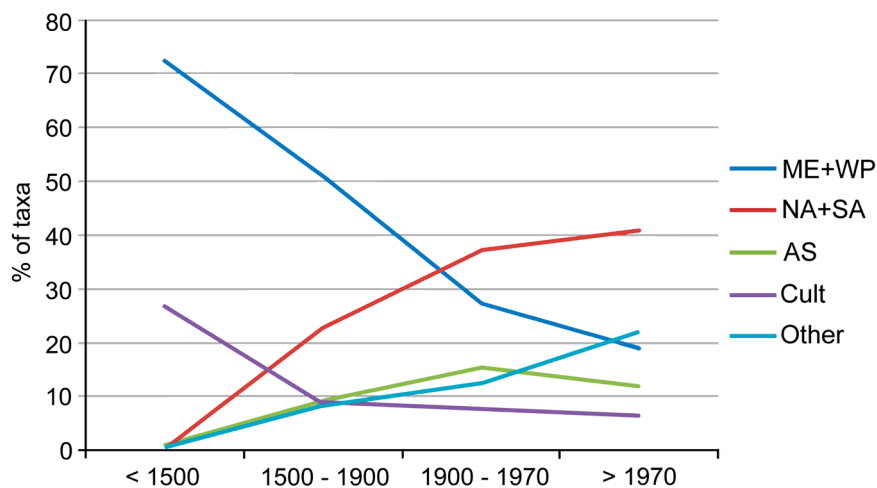


Figure 6. Temporal changes in the proportional contribution of the introduced plants, according to their origin, in Catalonia.

The relative importance of each origin changes when the degree of naturalization is considered (Figure 5). If only established taxa are considered, species from the Western Palearctic, South Africa and America increase their percentage, while those from Mediterranean and Asian origin decrease. The percentage reduction is even

more marked for cultivated plants and spontaneous hybrids. In the transition between established to invasive there are further important changes. More than half (59.0%) of the invasive species are of American origin, and the most successful are those from North America. Their relative representation doubles (from 15.1% of the

established to 36.0% of the invasives). The percentage of Asian plants also increases among invasive aliens, while for taxa with other origins it decreases.

Taxa of anthropogenic origin show very little capacity to become invasive, as they pass from 9.5% of the total to only 1.1% of the invasive aliens. Conversely, natural hybrids increase their representation (from 1.2% to 4.6%) thanks to the invasive behaviour of three *Oenothera* taxa and *Symphytum uplandicum*.

As it is predictable, temporal changes in the origin of the introduced plants are observed (Table 1, Figure 6). Until 1500 AD the allochthonous plants came from

nearby geographical regions or were domesticated taxa. In the period 1500–1900, as a result of intercontinental trade, alien flora diversified with species coming from all continents, apparently with the exception of Australasian plants. This tendency intensifies between 1900 and 1970, a period in which Australasian species are already detected, and the total number of plants of distant geographical areas (outside Western Palearctic) reaches more than half of the aliens (62.0%). In the most recent period, after 1970, the rate of new species arrivals becomes higher and those of distant origin has increased to 73.2%.

Table 1. Proportional contribution (%) of the introduced plants in Catalonia according to their origin in different temporal periods. ME: Mediterranean; WP: Western Palearctic; AS: Eastern and Southern Asia; NA: North America; SA: South America; AF: Tropical Africa; CA: South Africa; TRO: Tropical and Subtropical regions; AU: Australasia; CUL: Cultivated; Hyb: Spontaneous hybrids.

Period	ME	WP	AS	NA	SA	AF	CA	TRO	AU	CUL	Hyb
<1500	41.0	31.4	0.9	0	0	0	0	0	0	26.7	0
1500–1900	32.5	18.4	9.2	9.2	13.6	1.5	2.4	3.9	0	8.8	0.5
1900–1970	16.4	11.3	15.4	1.8	2.7	1.8	2.7	17.7	19.5	7.7	3.2
>1970	12.0	7.1	11.6	2.1	12.9	3.7	2.1	19.1	21.7	6.9	0.9

In all the periods after 1500, the species of distant regions come basically from America and Asia. The only exception are the South African plants, that reach a percentage of 12.9% in the post-1970 period, which must be attributed to the rise of the xerogardening in the urbanized areas of the Mediterranean coastline. The taxa from tropical Africa, Australasia or the pantropics always remained unimportant representations of less than 5%. The relative importance of the arrival of Mediterranean and Western Palearctic taxa has gradually decreased, being reduced to less than 20% in recent times. Anthropogenic taxa also decreased their representation after 1500, but then they maintained percentages of 6–9 %, which can be explained by the new introductions of agricultural species and garden cultivars.

Means of introduction

By far, the most common way of introduction has been gardening (Figure 7), with 620 taxa or 58.0%, a percentage very close to that obtained in Valencia, also in the Iberian Mediterranean area, by Sanz *et al.* (2011). Garden introductions have become even more common in recent times, as it is the origin of 68.5% of taxa detected after 1970. This was a predictable result, because gardening has already been pointed out as the most important introduction way in Europe (Lambdon *et al.*, 2008) and also at global scale (Bell *et al.*, 2003). Other means of introduction have been agriculture (229 taxa), closely followed by trade (198 taxa). Agriculture was the main way by which the majority of plants (85%) arrived before 1500 AD. However, this way was progressively reduced and represents only 6.8% of introductions in the post-1970. Forestry has a marginal role as an introduction way, with just 21 taxa.

If we consider the intentionality of the introductions, 767 taxa (71.9%) have arrived deliberately and 299 (28.1%) accidentally (spontaneous hybrids in situ originated are excluded). The rates are very similar to those obtained for the whole of Europe (Lambdon *et al.*, 2008). Usually, plants associated with gardening and forestry have been deliberately introduced and the species that arrived by trade accidentally, while those associated with agriculture are found in both categories.

Differences are observed in the degree of naturalization achieved by taxa introduced through different ways (Figure 7). The relative importance of the plants introduced by gardening decreases in the established aliens and more among invasives, while in those arrived by trade the tendency is all the opposite. The relative frequency of those related to agriculture somewhat increases among the established plants, but decreases among invasives.

Around 40–60% of the taxa introduced by agriculture, gardening and trade establish viable mid-term populations (54.6%, 43.1 and 59.1 %, respectively), while the proportion is lower among forestry species (19.0%). Regarding invasive capacity, the trade plants are more successful (15.6% of the total number are invasive) than those of agriculture and gardening (7.0 and 6.1%), while those of forestry show an intermediate success (9.5%).

Life history of the established alien plants

The growth type has been taken into account only for established (naturalised + invasive) alien taxa. Figure 8 shows the percentage of each category among the total number of established aliens and among invasives.

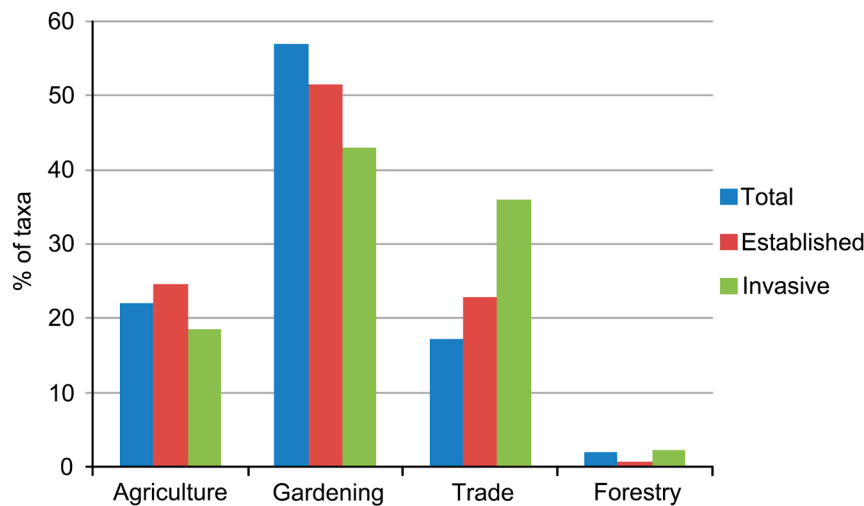


Figure 7. Proportional contribution of the most important inferred pathway of introduction to the alien flora of Catalonia.

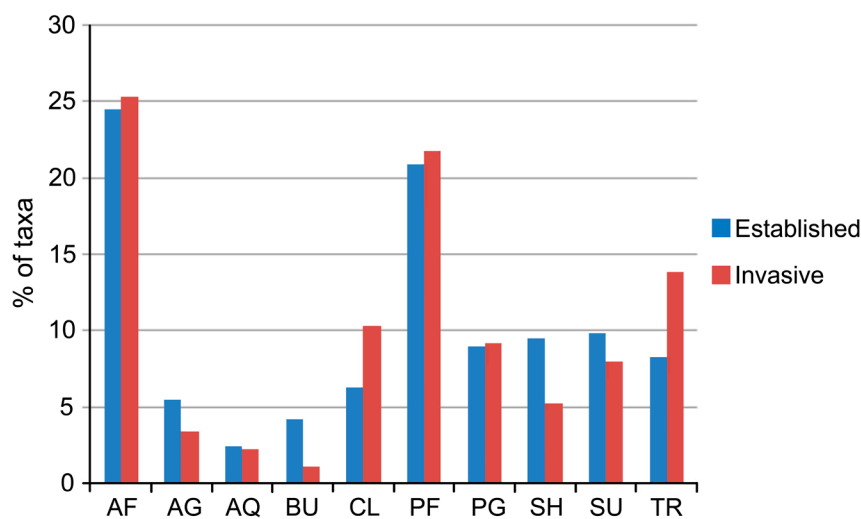


Figure 8. The percentage of taxa according to their plant growth type among the whole established aliens and among invasives. AF: annual forbs, AG: annual grasses, AQ: aquatic plants, BU: bulbous monocots, CL: climbers, PF: perennial forbs, PG: perennial grasses, SH: shrubs, SU: succulent plants, TR: trees.

For established alien taxa, the most common forms are the annual and perennial forbs, which together reach nearly half of the total number (45.0%). These two groups (and in the same order: annual-perennial) are also the most frequent on a global scale in continental regions (Pyšek *et al.*, 2017). All other categories represent less than 10% of non-native taxa, and in the case of aquatic and bulbous plants they do not reach 5%. The frequency of succulent plants is outstanding because it is unusual in Europe, but has also been observed in the adjacent region of Valencia (Sanz *et al.*, 2011) and is due to the important modern use of these plants in gardens of the Mediterranean coast.

Some changes in the percentages of diverse growth types are observed among invasive plants. Two categories (climbers and trees) clearly increase their relative frequency, so these growth forms seem to have

more invasive capacity, probably because they are more competitive in the regional semi-natural habitats. On the contrary, the annual grasses, bulbous monocots, shrubs and succulents show a decrease. The low invasive fitness of bulbous and succulents is probably related to their weak dispersal capacity, since in the local context, it is very frequent that they only spread vegetatively. In the case of annual grasses and shrubs, the cause could be the heavy competition of native taxa, as these growth types are very common in the Mediterranean habitats.

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The constructive comments and suggestions of Filip Verloove contributed greatly to improve the quality of this paper.

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Appendix 1. Checklist of the Catalanian vascular alien flora. Data are presented in the table with the following information fields: taxon (arranged alphabetically, incl. hybrid taxa), which are also organized alphabetically; family; degree of naturalisation (Nat. D.: C: casual; N: naturalised; I: invasive); geographic origin (Origin; ME: Mediterranean; WP: Western Palearctic; AS: Eastern and Southern Asia; TRO: Tropical and Subtropical regions; AU: Australasia; AF: Tropical Africa; CA: South Africa; NA: North America; SA: South America; Cult: Cultivated; Hyb: Spontaneous hybrids); abundance (Abun.; R: rare; S: scattered; L: locally abundant; C: common; V: vanished) and regional distribution (Pyr: Pyrenees; In: inland; Lit: littoral; +: presence confirmed; ?: uncertain presence). See also Table S1 in Supplementary material for information on residence time, introduction pathway and intentionality of introduction.

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Abelia ×grandiflora</i> (André) Rehder	Caprifoliaceae	C	Cult	R	.	.	+
<i>Abies pinsapo</i> Boiss. subsp. <i>pinsapo</i>	Pinaceae	C	ME	R	+	+	+
<i>Abutilon grandifolium</i> (Willd.) Sweet	Malvaceae	N	SA	S	.	.	+
<i>Abutilon theophrasti</i> Medik.	Malvaceae	N	AS	C	+	+	+
<i>Acacia dealbata</i> Link	Fabaceae	N	AU	C	.	.	+
<i>Acacia decurrens</i> Willd.	Fabaceae	C	AU	R	.	.	+
<i>Acacia longifolia</i> (Andrews) Willd.	Fabaceae	N	AU	S	.	.	+
<i>Acacia melanoxylon</i> R. Br.	Fabaceae	N	AU	R	.	.	+
<i>Acacia retinodes</i> Schlttdl.	Fabaceae	C	AU	S	.	.	+
<i>Acacia rostellifera</i> Benth.	Fabaceae	C	AU	R	.	.	+
<i>Acacia saligna</i> (Labill.) Wendl.	Fabaceae	N	AU	S	.	.	+
<i>Acanthus mollis</i> L.	Acanthaceae	N	ME	C	+	+	+
<i>Acca sellowiana</i> (O. Berg) Burret	Myrtaceae	C	SA	R	.	.	+
<i>Acer cappadocicum</i> Gled. subsp. <i>cappadocicum</i>	Sapindaceae	C	WP	R	+	.	.
<i>Acer negundo</i> L.	Sapindaceae	I	NA	C	+	+	+
<i>Acer pseudoplatanus</i> L.	Sapindaceae	I	WP	L	+	+	+
<i>Acer saccharinum</i> L.	Sapindaceae	C	NA	R	+	.	.
<i>Achillea arabica</i> Kotschy	Asteraceae	C	ME	R	.	+	.
<i>Achillea filipendulina</i> Lam.	Asteraceae	C	WP	S	+	+	.
<i>Achillea ligustica</i> All.	Asteraceae	C	ME	R	.	.	+
<i>Achillea roseo-alba</i> Ehrend.	Asteraceae	N	WP	L	+	.	.
<i>Acorus calamus</i> L.	Acoraceae	C	WP	R	.	+	.
<i>Adonis aestivalis</i> L. subsp. <i>aestivalis</i>	Ranunculaceae	N	WP, ME	R	+	.	.
<i>Adonis aestivalis</i> subsp. <i>squarrosa</i> (Steven) Nyman	Ranunculaceae	N	WP, ME	S	?	+	.
<i>Adonis annua</i> L.	Ranunculaceae	N	WP, ME	C	+	+	+
<i>Adonis flammea</i> Jacq.	Ranunculaceae	N	WP, ME	C	+	+	+
<i>Aegilops cylindrica</i> Host.	Poaceae	N	WP	R	+	.	.
<i>Aeonium arboreum</i> (L.) Webb & Berthel.	Crassulaceae	N	ME	S	.	.	+
<i>Aeonium canariense</i> (L.) Webb & Berthel.	Crassulaceae	C	ME	R	.	.	+
<i>Aeonium haworthii</i> Webb & Berthel.	Crassulaceae	C	ME	R	.	.	+
<i>Aeonium lindleyi</i> Webb & Berthel.	Crassulaceae	C	ME	R	.	.	+
<i>Aesculus hippocastanum</i> L.	Sapindaceae	N	WP	L	+	+	+
<i>Agapanthus praecox</i> Willd.	Amaryllidaceae	C	CA	R	.	.	+
<i>Agave americana</i> L.	Asparagaceae	I	NA	C	+	+	+
<i>Agave angustifolia</i> Haw.	Asparagaceae	C	NA	R	.	.	+
<i>Agave beauleriana</i> Jacobi	Asparagaceae	C	Cult	R	.	.	+
<i>Agave decipiens</i> Baker	Asparagaceae	C	Cult	R	.	.	+
<i>Agave difformis</i> A. Berger	Asparagaceae	N	NA	R	.	.	+
<i>Agave fourcroydes</i> Lem.	Asparagaceae	N	Cult	R	.	.	+
<i>Agave ingens</i> A. Berger	Asparagaceae	N	Cult	S	.	.	+
<i>Agave lechuguilla</i> Torr.	Asparagaceae	N	NA	R	.	.	+
<i>Agave salmiana</i> Salm-Dyck subsp. <i>salmiana</i>	Asparagaceae	N	NA	R	.	.	+
<i>Agave salmiana</i> subsp. <i>tehuacanensis</i> (Salm-Dyck) Garcia-Mend.	Asparagaceae	C	NA	R	.	.	+
<i>Agave sisalana</i> Perrine	Asparagaceae	N	Cult	R	.	.	+
<i>Agave univitatta</i> Haw.	Asparagaceae	C	NA	R	.	.	+
<i>Agave vera-cruz</i> Mill.	Asparagaceae	C	NA	R	.	.	+
<i>Agave weberi</i> J. Poiss.	Asparagaceae	C	NA	R	.	.	+
<i>Ageratum houstonianum</i> Mill.	Asteraceae	C	NA	V	.	.	+
<i>Agrostemma githago</i> L.	Caryophyllaceae	N	ME	L	+	+	+
<i>Ailanthus altissima</i> (Mill.) Swingle	Simaroubaceae	I	AS	C	+	+	+
<i>Albizia julibrissin</i> Durazz.	Fabaceae	C	AS	R	+	.	+
<i>Albica bracteata</i> (Thunb.) J.C. Manning & Goldblatt	Asparagaceae	C	CA	R	.	.	.
<i>Alcea rosea</i> L.	Malvaceae	C	Cult	S	+	+	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Allium cepa</i> L.	Amaryllidaceae	C	Cult	R	+	+	+
<i>Allium dentiferum</i> Webb & Berthel.	Amaryllidaceae	N	ME	C	+	+	+
<i>Allium fistulosum</i> L.	Amaryllidaceae	C	AS	R	+	.	.
<i>Allium flavum</i> L.	Amaryllidaceae	C	ME	R	.	.	+
<i>Allium fuscum</i> Waldst. & Kit.	Amaryllidaceae	C	ME	R	.	.	+
<i>Allium neapolitanum</i> Cirillo	Amaryllidaceae	N	ME	C	+	+	+
<i>Allium nigrum</i> L.	Amaryllidaceae	C	ME	V	.	.	+
<i>Allium porrum</i> L.	Amaryllidaceae	N	ME	W	+	+	+
<i>Allium sativum</i> L.	Amaryllidaceae	C	Cult	S	+	+	+
<i>Allium triquetrum</i> L.	Amaryllidaceae	N	ME	C	.	+	+
<i>Alnus alnobetula</i> (Ehrh.) K. Koch subsp. <i>alnobetula</i>	Betulaceae	I	WP	R	+	.	.
<i>Alnus cordata</i> (Loisel.) Duby	Betulaceae	C	ME	V	.	.	+
<i>Aloe arborescens</i> Mill.	Asphodelaceae	N	CA	S	.	.	+
<i>Aloe ferox</i> Mill.	Asphodelaceae	C	CA	R	.	.	+
<i>Aloe framesii</i> L. Bolus	Asphodelaceae	N	CA	R	.	.	+
<i>Aloe maculata</i> All.	Asphodelaceae	N	CA	L	.	+	+
<i>Aloe officinalis</i> Forssk.	Asphodelaceae	N	AS	L	.	.	+
<i>Aloe perfoliata</i> L.	Asphodelaceae	C	CA	R	.	.	+
<i>Aloe vera</i> (L.) Burm. f.	Asphodelaceae	C	AF	R	.	.	+
<i>Aloe ×delaetii</i> Radl.	Asphodelaceae	C	Cult	R	.	.	+
<i>Aloe ×nobilis</i> Haw.	Asphodelaceae	C	Cult	R	.	.	+
<i>Aloe ×spinosissima</i> Jahand.	Asphodelaceae	C	Cult	R	.	.	+
<i>Aloiampelos ciliaris</i> (Haw.) Klopper & Gideon F. Sm.	Asphodelaceae	N	CA	R	.	.	.
<i>Aloisia cytriadora</i> Palau	Verbenaceae	C	SA	R	+	.	+
<i>Alternanthera caracasana</i> Kunth	Amaranthaceae	N	SA	L	.	.	+
<i>Alternanthera pungens</i> Kunth	Amaranthaceae	N	SA	S	.	.	+
<i>Amaranthus albus</i> L.	Amaranthaceae	I	NA	C	+	+	+
<i>Amaranthus blitoides</i> S. Watson	Amaranthaceae	I	NA	C	+	+	+
<i>Amaranthus caudatus</i> L.	Amaranthaceae	C	Cult	V	.	.	+
<i>Amaranthus cruentus</i> L.	Amaranthaceae	N	SA	C	+	+	+
<i>Amaranthus deflexus</i> L.	Amaranthaceae	N	SA	C	+	+	+
<i>Amaranthus emarginatus</i> Uline	Amaranthaceae	N	SA	L	+	+	+
<i>Amaranthus hybridus</i> L.	Amaranthaceae	I	NA	C	+	+	+
<i>Amaranthus hypochondriacus</i> L.	Amaranthaceae	C	Cult	R	+	.	+
<i>Amaranthus muricatus</i> Moq.	Amaranthaceae	I	SA	C	+	+	+
<i>Amaranthus palmeri</i> S. Watson	Amaranthaceae	N	NA	L	.	+	+
<i>Amaranthus powellii</i> S. Watson	Amaranthaceae	I	NA	C	+	+	+
<i>Amaranthus retroflexus</i> L.	Amaranthaceae	I	NA	C	+	+	+
<i>Amaranthus spinosus</i> L.	Amaranthaceae	C	SA	R	+	.	+
<i>Amaranthus tricolor</i> L.	Amaranthaceae	C	Cult	R	.	.	+
<i>Amaranthus viridis</i> L.	Amaranthaceae	C	AS	L	.	+	+
<i>Amaranthus ×ozanonii</i> Priszter	Amaranthaceae	C	Hyb	R	.	+	.
<i>Amaranthus ×soproniensis</i> Priszter & Kárpáti	Amaranthaceae	C	Hyb	R	+	.	.
<i>Amaranthus ×tarraconensis</i> Sennen & Pau	Amaranthaceae	C	Hyb	R	.	.	+
<i>Ambrosia artemisiifolia</i> L.	Asteraceae	C	NA	R	.	.	+
<i>Ambrosia psilostachya</i> DC.	Asteraceae	N	NA	C	+	+	+
<i>Ambrosia tenuifolia</i> Spreng.	Asteraceae	N	SA	S	.	+	+
<i>Amelichloa brachychaeta</i> (Godr.) Arriaga & Barkworth	Poaceae	N	SA	R	.	.	+
<i>Amelichloa caudata</i> (Trin.) Arriaga & Barkworth	Poaceae	I	SA	L	.	.	+
<i>Ammannia baccifera</i> L.	Lythraceae	C	AS, AF	V	.	.	+
<i>Ammannia coccinea</i> Rottb.	Lythraceae	N	NA, SA	S	.	+	+
<i>Ammannia robusta</i> Heer & Regel	Lythraceae	N	NA, SA	L	.	+	+
<i>Amorpha fruticosa</i> L.	Fabaceae	N	NA	R	.	.	+
<i>Anacyclus radiatus</i> Loisel. subsp. <i>radiatus</i>	Asteraceae	C	ME	R	+	+	+
<i>Anagyris foetida</i> L.	Fabaceae	N	ME	S	.	+	+
<i>Anemone coronaria</i> L.	Ranunculaceae	N	ME	R	.	.	+
<i>Anethum graveolens</i> L.	Apiaceae	N	ME	S	+	+	+
<i>Anredera cordifolia</i> (Ten.) Steenis	Basellaceae	N	SA	C	+	+	+
<i>Anthriscus cerefolium</i> (L.) Hoffm.	Apiaceae	N	WP	R	.	.	+
<i>Araujia sericifera</i> Brot.	Apocynaceae	N	SA	C	.	+	+
<i>Arctotheca calendula</i> (L.) Levyns	Asteraceae	N	CA	S	.	.	+
<i>Aristolochia sempervirens</i> L.	Aristolochiaceae	N	ME	R	.	.	+
<i>Armoracia rusticana</i> P. Gaertn., B. Mey. & Scherb.	Brassicaceae	N	WP	R	.	.	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Artemisia abrotanum</i> L.	Asteraceae	C	ME	R	+	.	+
<i>Artemisia annua</i> L.	Asteraceae	N	WP	L	+	+	+
<i>Artemisia arborescens</i> (Vaill.) L.	Asteraceae	N	ME	L	.	.	+
<i>Artemisia dracunculus</i> L.	Asteraceae	C	WP	R	.	.	+
<i>Artemisia thuscula</i> Cav.	Asteraceae	N	ME	R	.	.	+
<i>Artemisia verlotiorum</i> Lamotte	Asteraceae	I	AS	C	+	+	+
<i>Arundo donax</i> L.	Poaceae	I	AS	C	+	+	+
<i>Asclepias curassavica</i> L.	Apocynaceae	C	SA	R	.	.	+
<i>Asparagus aethiopicus</i> L.	Asparagaceae	C	CA	S	.	+	+
<i>Asparagus asparagoides</i> (L.) Druce	Asparagaceae	C	CA	R	.	.	+
<i>Asparagus officinalis</i> L.	Asparagaceae	C	WP	C	+	+	+
<i>Asparagus setaceus</i> (Kunth) Jessop	Asparagaceae	N	CA	S	.	.	+
<i>Aspidistra elatior</i> Blume	Asparagaceae	C	AS	R	.	.	+
<i>Astragalus boeticus</i> L.	Fabaceae	N	ME	R	.	.	+
<i>Astragalus scorpioides</i> Willd.	Fabaceae	C	ME	V	.	.	+
<i>Atriplex hortensis</i> L.	Amaranthaceae	N	WP	S	+	+	+
<i>Atriplex micrantha</i> Ledeb.	Amaranthaceae	N	WP	S	+	+	.
<i>Atriplex semibaccata</i> R. Br.	Amaranthaceae	N	AU	R	.	.	+
<i>Atriplex tatarica</i> L.	Amaranthaceae	N	WP	L	.	+	+
<i>Aubrieta columnae</i> Guss.	Brassicaceae	N	ME	R	+	+	.
<i>Aucuba japonica</i> Thunb.	Garryaceae	C	AS	R	.	.	+
<i>Austrocylindropuntia subulata</i> (Muehlenpf.) Backeb.	Cactaceae	N	SA	S	.	+	+
<i>Avena fatua</i> L. subsp. <i>fatua</i>	Poaceae	N	WP	C	+	+	+
<i>Avena sativa</i> L. subsp. <i>byzantina</i> (C. Koch) Romero Zarco	Poaceae	C	WP	R	.	.	+
<i>Avena sativa</i> L. subsp. <i>sativa</i>	Poaceae	C	WP	C	+	+	+
<i>Axonopus compressus</i> (Sw.) P. Beauv.	Poaceae	C	SA	R	.	.	+
<i>Azolla filiculoides</i> Lam.	Salviniaceae	I	NA, SA	L	.	+	+
<i>Baccharis halimifolia</i> L.	Asteraceae	C	NA	R	.	.	+
<i>Baccharis salicina</i> Torr. & A. Gray	Asteraceae	C	NA	R	.	.	+
<i>Ballota hirsuta</i> Benth.	Lamiaceae	C	ME	R	.	.	+
<i>Bassia scoparia</i> (L.) Voss subsp. <i>scoparia</i>	Amaranthaceae	N	WP	C	+	+	+
<i>Bauhinia forficata</i> Link subsp. <i>pruinosa</i> (Vogel) Fortunato & Wunderlin	Fabaceae	C	SA	R	.	.	+
<i>Begonia ×semperflorens</i> Link & Otto	Bignoniaceae	C	Cult	R	+	.	.
<i>Bellevalia romana</i> (L.) Sweet	Asparagaceae	C	ME	V	.	.	+
<i>Berberis vulgaris</i> L.	Berberidaceae	N	WP	R	+	.	+
<i>Berberis ×ottawensis</i> C.K. Schneider	Berberidaceae	C	Cult	R	+	.	.
<i>Bergenia crassifolia</i> (L.) Fritsch	Saxifragaceae	C	AS	R	+	+	.
<i>Bergia capensis</i> L.	Elatinaceae	N	AS, AF	L	.	.	+
<i>Berteroa incana</i> (L.) DC.	Brassicaceae	N	WP	R	+	.	.
<i>Beta vulgaris</i> L.	Amaranthaceae	N	WP	C	+	+	+
<i>Bidens aurea</i> (Aiton) Sherff	Asteraceae	N	NA	C	.	+	+
<i>Bidens frondosus</i> L.	Asteraceae	I	NA	C	+	+	+
<i>Bidens pilosus</i> L.	Asteraceae	N	SA	S	.	.	+
<i>Bidens subalternans</i> DC.	Asteraceae	I	SA	C	+	+	+
<i>Bifora radians</i> M. Bieb.	Apiaceae	N	ME	L	+	+	+
<i>Bifora testiculata</i> (L.) Spreng.	Apiaceae	N	ME	L	+	+	+
<i>Bothriochloa barbinodis</i> (Lag.) Herter	Poaceae	N	NA, SA	R	.	.	+
<i>Bothriochloa saccharoides</i> (Sw.) Rydb.	Poaceae	C	SA	S	.	.	+
<i>Bougainvillea glabra</i> Choisy	Nyctaginaceae	C	SA	R	.	.	+
<i>Bouteloua dactyloides</i> (Nutt.) Columbus	Poaceae	N	NA	R	.	.	+
<i>Bouteloua gracilis</i> (Kunth) Griffiths	Poaceae	C	NA	R	.	.	+
<i>Brachiaria platyphylla</i> (C. Wright) Nash	Poaceae	C	NA	R	.	+	.
<i>Brachychiton populneus</i> (Schott & Endl.) R. Br.	Sterculiaceae	C	AU	R	.	.	+
<i>Brasiliopuntia schickendantzii</i> (F.A.C. Weber) R. Puente & Majure	Cactaceae	C	SA	S	.	+	+
<i>Brassica barrelieri</i> (L.) Janka	Brassicaceae	C	ME	R	+	.	.
<i>Brassica juncea</i> (L.) Czern.	Brassicaceae	C	WP	V	?	.	+
<i>Brassica napus</i> L.	Brassicaceae	C	Cult	S	+	+	+
<i>Brassica nigra</i> (L.) K. Koch	Brassicaceae	C	ME	C	+	+	+
<i>Brassica oleracea</i> L.	Brassicaceae	C	WP	C	+	+	+
<i>Brassica rapa</i> L.	Brassicaceae	C	ME	S	+	.	+
<i>Brassica tournefortii</i> Gouan	Brassicaceae	C	ME	R	.	.	+
<i>Bromus arvensis</i> L. subsp. <i>arvensis</i>	Poaceae	N	WP	S	+	?	+
<i>Bromus catharticus</i> Vahl	Poaceae	I	SA	C	+	+	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Bromus inermis</i> Leyss. subsp. <i>inermis</i>	Poaceae	C	WP	S	+	+	+
<i>Bromus secalinus</i> L. subsp. <i>secalinus</i>	Poaceae	C	WP	S	+	.	+
<i>Broussonetia papyrifera</i> (L.) Vent.	Moraceae	N	AS	L	+	+	+
<i>Brugmansia suaveolens</i> (Willd.) Bercht. & J. Presl	Solanaceae	C	SA	R	.	.	+
<i>Buddleja davidii</i> Franch.	Scrophulariaceae	I	AS	C	+	+	+
<i>Bulbine frutescens</i> (L.) Willd.	Asphodelaceae	C	CA	R	.	.	+
<i>Bunias orientalis</i> L.	Brassicaceae	N	WP	R	+	.	.
<i>Bunium pachypodium</i> P.W. Ball	Apiaceae	C	ME	V	.	.	+
<i>Bupleurum rotundifolium</i> L.	Apiaceae	N	ME	C	+	+	+
<i>Bupleurum subovatum</i> Spreng.	Apiaceae	N	ME	L	.	.	+
<i>Calendula officinalis</i> L.	Asteraceae	N	Cult	C	+	+	+
<i>Calocedrus decurrens</i> (Torr.) Florin	Cupressaceae	C	NA, SA	R	.	.	+
<i>Camelina microcarpa</i> DC.	Brassicaceae	N	WP	C	+	+	+
<i>Camelina rumelica</i> Velen.	Brassicaceae	N	WP	R	.	+	+
<i>Camelina sativa</i> (L.) Crantz	Brassicaceae	C	WP	V	.	.	+
<i>Campanula portenschlagiana</i> Schultz.	Campanulaceae	N	ME	R	+	.	+
<i>Campsis radicans</i> (L.) Seem.	Bignoniaceae	N	NA	S	.	+	+
<i>Campsis × tagliabuana</i> (Vis.) Rehder	Bignoniaceae	C	Cult	R	.	.	+
<i>Canna indica</i> L.	Cannaceae	C	SA	R	.	.	+
<i>Canna × generalis</i> L.H. Bailey & E.Z. Bailey	Cannaceae	N	Cult	S	.	.	+
<i>Cannabis sativa</i> L.	Cannabaceae	C	WP	S	.	+	+
<i>Cardamine occulta</i> Hornem.	Brassicaceae	N	AS	R	+	+	+
<i>Cardiospermum grandiflorum</i> Sw.	Sapindaceae	N	SA	R	.	.	+
<i>Cardiospermum halicacabum</i> L.	Sapindaceae	C	SA	R	.	.	+
<i>Carduncellus caeruleus</i> (L.) C. Presl	Asteraceae	C	ME	R	.	.	+
<i>Carpinus betulus</i> L.	Betulaceae	C	WP	R	+	+	+
<i>Carpobrotus acinaciformis</i> (L.) L. Bolus	Aizoaceae	C	CA	R	.	.	+
<i>Carpobrotus edulis</i> (L.) N.E. Br.	Aizoaceae	I	CA	C	.	+	+
<i>Carthamus tinctorius</i> L.	Asteraceae	C	Cult	V	.	.	+
<i>Carya illinoensis</i> (Wangenh.) K. Koch	Juglandaceae	C	NA	R	.	.	+
<i>Castanea sativa</i> Mill.	Fagaceae	N	WP	C	+	+	+
<i>Casuarina cunninghamiana</i> Miq.	Casuarinaceae	C	AU	S	.	.	+
<i>Catalpa bignonioides</i> Walter	Bignoniaceae	C	NA	S	+	+	+
<i>Catharanthus roseus</i> (L.) G. Don	Apocynaceae	C	AF	R	.	.	+
<i>Cedrus atlantica</i> (Endl.) Carrière	Pinaceae	C	ME	S	+	+	+
<i>Cedrus deodara</i> (Lamb.) G. Don.	Pinaceae	C	AS	R	.	.	+
<i>Celosia argentea</i> L.	Amaranthaceae	C	AS	R	.	.	+
<i>Celtis australis</i> L. subsp. <i>australis</i>	Cannabaceae	I	ME	C	+	+	+
<i>Celtis occidentalis</i> L.	Cannabaceae	C	NA	R	.	+	.
<i>Cenchrus ciliaris</i> L.	Poaceae	C	ME, AS, AF	R	.	.	+
<i>Cenchrus clandestinus</i> (Chiov.) Morrone	Poaceae	N	AF	S	.	.	+
<i>Cenchrus flaccidus</i> (Griseb.) Morrone	Poaceae	C	AS	R	.	.	+
<i>Cenchrus longisetus</i> M.C. Johnst.	Poaceae	N	AF	C	+	+	+
<i>Cenchrus orientalis</i> (Rich.) Morrone	Poaceae	N	WP, AS	R	.	.	+
<i>Cenchrus setaceus</i> (Forssk.) Morrone	Poaceae	N	ME, AF	R	.	.	+
<i>Cenchrus spinifex</i> Cav.	Poaceae	N	NA, SA	L	.	.	+
<i>Centaurea castellanoides</i> Talavera subsp. <i>talaverae</i> E. López & Devesa	Asteraceae	C	ME	V	.	.	.
<i>Centaurea cyanus</i> L.	Asteraceae	N	ME	C	+	+	+
<i>Centaurea depressa</i> M. Bieb.	Asteraceae	C	WP	R	+	.	.
<i>Centaurea diluta</i> Aiton	Asteraceae	C	ME	R	.	.	+
<i>Centranthus macrosiphon</i> Boiss.	Caprifoliaceae	C	ME	V	.	.	+
<i>Cephalaria syriaca</i> (L.) Roem. & Schult.	Dipsacaceae	C	ME	R	.	+	+
<i>Cerastium dichotomum</i> L.	Caryophyllaceae	N	ME	S	.	.	+
<i>Cerastium tomentosum</i> L.	Caryophyllaceae	N	ME	S	+	+	+
<i>Ceratonia siliqua</i> L.	Fabaceae	I	ME	L	.	+	+
<i>Ceratostigma plumbaginoides</i> Bunge	Plumbaginaceae	C	AS, AF	R	.	.	+
<i>Cercis siliquastrum</i> L.	Fabaceae	N	ME	S	+	+	+
<i>Cereus hildmannianus</i> K. Schum.	Cactaceae	C	SA	R	.	.	+
<i>Cestrum nocturnum</i> L.	Solanaceae	C	SA	R	.	.	+
<i>Cestrum parqui</i> L'Hérit.	Solanaceae	C	SA	S	.	.	+
<i>Chaenomeles speciosa</i> (Sweet) Nakai	Rosaceae	C	AS	R	.	+	.
<i>Charybdis numidica</i> (Jord. & Fourr.) Speta	Asparagaceae	C	ME	S	.	.	+
<i>Charybdis pancration</i> (Steinh.) Speta	Asparagaceae	C	ME	R	.	.	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Chenopodium nutans</i> (R. Br.) S.Fuentes & Borsch	Amaranthaceae	I	AU	L	.	.	+
<i>Chenopodium strictum</i> Roth	Amaranthaceae	N	WP	R	.	.	+
<i>Chloris gayana</i> Kunth	Poaceae	N	AS, AF	L	.	.	+
<i>Chloris truncata</i> R. Br.	Poaceae	N	AU	R	.	.	+
<i>Chloris virgata</i> Sw.	Poaceae	N	AS, AF	R	.	.	+
<i>Chlorophytum comosum</i> (Thunb.) Jacques	Asparagaceae	C	CA	R	.	.	+
<i>Chrysanthemum indicum</i> L.	Asteraceae	C	AS	V	.	.	+
<i>Cicer arietinum</i> L.	Fabaceae	C	Cult	S	.	.	+
<i>Cichorium endivia</i> L.	Asteraceae	C	Cult	R	.	.	+
<i>Citrullus colocynthis</i> (L.) Schrad.	Cucurbitaceae	C	ME, AS, AF	R	.	.	+
<i>Citrullus lanatus</i> (Thunb.) Matsum. & Nakai	Cucurbitaceae	C	AF	S	+	+	+
<i>Citrus ×aurantium</i> L.	Rutaceae	C	Cult	R	.	.	+
<i>Citrus ×limon</i> (L.) Burm.	Rutaceae	C	Cult	R	.	.	+
<i>Clarkia unguiculata</i> Lindl.	Onagraceae	C	NA	R	+	.	.
<i>Cleistocactus hyalacanthus</i> (K. Schum.) Rol.-Goss.	Cactaceae	C	SA	R	.	.	+
<i>Cleistocactus straussii</i> (Heese) Backeb.	Cactaceae	C	SA	R	.	.	+
<i>Cleome violacea</i> L.	Cleomaceae	C	ME	R	.	.	+
<i>Clerodendrum bungei</i> Steud.	Lamiaceae	C	AS	R	.	.	+
<i>Clerodendrum trichotomum</i> Thunb.	Lamiaceae	C	AS	R	.	+	.
<i>Colocasia esculenta</i> (L.) Schott	Araceae	N	AS	L	.	.	+
<i>Commelina communis</i> L.	Commelinaceae	C	AS	R	+	.	+
<i>Commelina erecta</i> L.	Commelinaceae	C	NA, SA	R	.	.	+
<i>Conringia orientalis</i> (L.) Dumort.	Brassicaceae	N	WP	L	+	+	+
<i>Convolvulus betonicifolius</i> Mill.	Convolvulaceae	N	ME	R	+	.	.
<i>Convolvulus farinosus</i> L.	Convolvulaceae	N	AF	R	.	.	+
<i>Convolvulus sabatius</i> Viv.	Convolvulaceae	C	ME	R	.	.	+
<i>Convolvulus tricolor</i> L. subsp. <i>tricolor</i>	Convolvulaceae	C	ME	R	.	+	+
<i>Coreopsis lanceolata</i> L.	Asteraceae	C	NA	R	.	.	+
<i>Coreopsis tinctoria</i> Nutt.	Asteraceae	C	NA	R	+	.	.
<i>Coriandrum sativum</i> L.	Apiaceae	C	ME	R	.	.	+
<i>Cornus mas</i> L.	Cornaceae	N	WP	R	.	+	.
<i>Coronilla valentina</i> L. subsp. <i>glauca</i> (L.) Batt.	Fabaceae	I	ME	C	.	+	+
<i>Cortaderia selloana</i> (Schult. & Schult. f.) Asch. & Graebn.	Poaceae	I	SA	L	.	.	+
<i>Corylus colurna</i> L.	Betulaceae	C	WP	R	.	+	.
<i>Cosmos bipinnatus</i> Cav.	Asteraceae	C	NA	R	+	+	+
<i>Cotinus coggygria</i> Scop.	Anacardiaceae	C	ME	R	.	.	+
<i>Cotoneaster affinis</i> Lindl.	Rosaceae	N	AS	R	.	+	.
<i>Cotoneaster apiculatus</i> Rehder & E.H. Wilson	Rosaceae	N	AS	R	+	+	.
<i>Cotoneaster bullatus</i> Bois	Rosaceae	C	AS	R	+	.	.
<i>Cotoneaster dielsianus</i> E. Pritz.	Rosaceae	N	AS	R	+	.	.
<i>Cotoneaster coriaceus</i> Franchet	Rosaceae	N	AS	L	+	+	+
<i>Cotoneaster divaricatus</i> Rehder & E.H. Wilson	Rosaceae	C	AS	R	.	+	.
<i>Cotoneaster franchetii</i> Bois	Rosaceae	C	AS	R	+	.	+
<i>Cotoneaster horizontalis</i> Decne.	Rosaceae	C	AS	R	+	+	+
<i>Cotoneaster pannosus</i> Franch.	Rosaceae	N	AS	L	+	+	+
<i>Cotoneaster salicifolius</i> Franch.	Rosaceae	C	AS	R	.	.	+
<i>Cotoneaster simonsii</i> Baker	Rosaceae	N	AS	R	.	+	.
<i>Cotula australis</i> (Spreng.) Hook. f.	Asteraceae	N	AU	S	+	+	+
<i>Cotula coronopifolia</i> L.	Asteraceae	N	CA	R	.	.	+
<i>Cotyledon orbiculata</i> L.	Crassulaceae	N	CA	R	.	.	+
<i>Crassula arborescens</i> (Mill.) Willd.	Crassulaceae	C	CA	R	.	.	+
<i>Crassula multicava</i> Lem.	Crassulaceae	C	CA	S	.	.	+
<i>Crassula muscosa</i> L.	Crassulaceae	N	CA	S	.	.	+
<i>Crassula nudicaulis</i> L.	Crassulaceae	C	CA	R	.	.	+
<i>Crassula ovata</i> (Mill.) Druce	Crassulaceae	C	CA	S	.	.	+
<i>Crassula pubescens</i> Thunb. subsp. <i>radicans</i> (Haw.) Toelken	Crassulaceae	N	CA	R	.	.	+
<i>Crassula tetragona</i> L. subsp. <i>robusta</i> (Toelken) Toelken	Crassulaceae	N	CA	S	.	.	+
<i>Crataegus azarolus</i> L.	Rosaceae	C	ME	V	.	.	+
<i>Crepis bellidifolia</i> Loisel.	Asteraceae	C	ME	V	.	.	+
<i>Crepis bursifolia</i> L.	Asteraceae	N	ME	C	+	+	+
<i>Crepis sancta</i> (L.) Bornm. subsp. <i>sancta</i>	Asteraceae	N	ME	C	+	+	+
<i>Crepis zacintha</i> (L.) Loisel.	Asteraceae	C	ME	V	.	.	+
<i>Crocsmia ×crocsmiflora</i> (Lemoine) N.E. Br.	Iridaceae	N	Cult	S	.	.	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Crocus sativus</i> L.	Iridaceae	C	Cult	S	+	+	+
<i>Cucumis melo</i> L.	Cucurbitaceae	C	AS	S	.	.	+
<i>Cucumis sativus</i> L.	Cucurbitaceae	C	AS	S	+	+	+
<i>Cucurbita maxima</i> Duchesne	Cucurbitaceae	C	Cult	S	+	+	+
<i>Cucurbita moschata</i> Duchesne	Cucurbitaceae	C	SA	R	+	.	+
<i>Cucurbita pepo</i> L.	Cucurbitaceae	C	Cult	S	+	.	+
<i>Cupressus sempervirens</i> L.	Cupressaceae	C	ME	S	+	+	+
<i>Cuscuta campestris</i> Yunck.	Convolvulaceae	N	NA	C	+	+	+
<i>Cuscuta epilinum</i> Boenn.	Convolvulaceae	C	ME	V	.	.	+
<i>Cyclamen hederifolium</i> Aiton	Primulaceae	N	ME	R	+	.	+
<i>Cyclamen persicum</i> Mill.	Primulaceae	C	ME	R	.	.	+
<i>Cyclospermum leptophyllum</i> (Pers.) Sprague	Apiaceae	C	SA	L	.	.	+
<i>Cydonia oblonga</i> Mill.	Rosaceae	N	WP	C	+	+	+
<i>Cylindropuntia fulgida</i> (Engelm.) F.M. Knuth	Cactaceae	C	NA	C	.	.	+
<i>Cylindropuntia imbricata</i> (Haw.) F.M. Knuth	Cactaceae	N	NA	R	.	+	+
<i>Cylindropuntia leptocaulis</i> (DC.) F.M. Knuth	Cactaceae	C	NA	R	.	+	+
<i>Cylindropuntia pallida</i> (Rose) F.M. Knuth	Cactaceae	I	NA	L	+	+	+
<i>Cylindropuntia prolifera</i> (Engelm.) F.M. Knuth	Cactaceae	C	NA	R	.	.	+
<i>Cylindropuntia spinosior</i> (Engelm.) F.M. Knuth	Cactaceae	C	NA	S	+	+	+
<i>Cylindropuntia tunicata</i> (Lehm) F.M. Knuth	Cactaceae	C	NA	C	.	.	+
<i>Cymbalaria muralis</i> G. Gaertn., B. Mey. & Scherb. subsp. <i>muralis</i>	Plantaginaceae	N	ME	C	+	+	+
<i>Cynara baetica</i> (Spreng.) Pau	Asteraceae	C	ME	R	.	.	+
<i>Cynara cardunculus</i> L.	Asteraceae	N	ME	S	.	+	+
<i>Cynara scolymus</i> L.	Asteraceae	C	Cult	R	.	+	+
<i>Cyperus alternifolius</i> L. subsp. <i>flabelliformis</i> (Rottb.) Kük.	Cyperaceae	N	AF	S	.	.	+
<i>Cyperus congestus</i> Vahl	Cyperaceae	N	CA	S	.	.	+
<i>Cyperus difformis</i> L.	Cyperaceae	N	AS, AF, SA	L	.	+	+
<i>Cyperus eragrostis</i> Lam.	Cyperaceae	I	NA, SA	C	+	+	+
<i>Cyperus esculentus</i> L.	Cyperaceae	N	ME, AS, AF, NA	C	.	+	+
<i>Cyperus exaltatus</i> Retz.	Cyperaceae	N	AS, AF	S	.	.	+
<i>Cyperus glomeratus</i> L.	Cyperaceae	N	WP	R	.	+	.
<i>Cyperus odoratus</i> L.	Cyperaceae	N	AS, AF, SA	S	.	.	+
<i>Cyperus papyrus</i> L.	Cyperaceae	C	AF	R	.	.	+
<i>Cyperus strigosus</i> L.	Cyperaceae	C	NA	V	.	.	.
<i>Cyrtomium falcatum</i> (L. fil.) C. Presl	Dryopteridaceae	N	AS	R	.	.	+
<i>Cyrtomium fortunei</i> J. Smith	Dryopteridaceae	C	AS	R	.	.	+
<i>Cytisus grandiflorus</i> (Brot.) DC.	Fabaceae	C	ME	R	+	.	.
<i>Cytisus striatus</i> (Hill) Rothm.	Fabaceae	N	ME	R	+	.	.
<i>Dactyloctenium aegyptium</i> (L.) Willd.	Poaceae	C	AS, AF	R	.	+	+
<i>Dasyilirion serratifolium</i> (Schult. f.) Zucc.	Asparagaceae	C	NA	R	.	.	+
<i>Datura ferox</i> L.	Solanaceae	N	AS	S	.	+	+
<i>Datura inoxia</i> Mill.	Solanaceae	N	SA	R	.	?	+
<i>Datura stramonium</i> L.	Solanaceae	N	SA	C	+	+	+
<i>Datura wrightii</i> Regel	Solanaceae	N	NA	S	+	+	+
<i>Daucus carota</i> L. subsp. <i>sativus</i> (Hoffm.) Schübl. & G. Martens	Apiaceae	C	Cult	S	.	.	+
<i>Daucus muricatus</i> (L.) L.	Apiaceae	C	ME	R	.	.	+
<i>Delairea odorata</i> Lem.	Asteraceae	I	CA	C	.	+	+
<i>Delosperma cooperi</i> (Hook f.) L. Bolus	Aizoaceae	C	CA	R	+	.	.
<i>Delosperma ecklonis</i> (Salm-Dyck) Schwantes	Aizoaceae	N	CA	R	.	.	+
<i>Delphinium ajacis</i> L.	Ranunculaceae	C	ME	S	+	+	+
<i>Delphinium orientale</i> J. Gay	Ranunculaceae	C	ME	R	.	.	+
<i>Dianthus caryophyllus</i> L. subsp. <i>caryophyllus</i>	Caryophyllaceae	C	ME	R	.	.	+
<i>Dichondra micrantha</i> Urb.	Convolvulaceae	C	AS	S	.	+	+
<i>Digitaria ciliaris</i> (Retz.) Koeler	Poaceae	C	AS	S	.	.	+
<i>Digitaria sanguinalis</i> (L.) Scop. subsp. <i>pectiniformis</i> Henrard	Poaceae	C	WP	V	.	.	+
<i>Digitaria sanguinalis</i> (L.) Scop. subsp. <i>sanguinalis</i>	Poaceae	N	WP	C	+	+	+
<i>Digitaria violascens</i> Link	Poaceae	C	AS	S	.	+	+
<i>Dimorphotheca fruticosa</i> (L.) DC.	Asteraceae	C	CA	R	.	.	+
<i>Diospyros kaki</i> L.	Ebenaceae	C	AS	S	.	.	+
<i>Diospyros lotus</i> L.	Ebenaceae	N	WP	R	+	+	+
<i>Diospyros virginiana</i> L.	Ebenaceae	C	NA	R	.	.	+
<i>Diplachne fusca</i> (L.) Roem. & Schult. subsp. <i>uninervia</i> (J. Presl)	Poaceae	N	NA, SA	L	.	+	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Diplotaxis tenuifolia</i> (L.) DC.	Brassicaceae	N	ME	S	.	.	+
<i>Dipsacus sativus</i> (L.) Honck.	Dipsacaceae	C	Cult	R	.	.	+
<i>Disphyma crassifolium</i> (L.) L. Bolus	Aizoaceae	N	CA	S	.	.	+
<i>Dolicandra ungui-cati</i> (L.) L.G. Lohmann	Bignoniaceae	C	SA	R	.	.	+
<i>Dracunculus vulgaris</i> Schott	Araceae	C	ME	V	.	.	+
<i>Drosanthemum floribundum</i> (Haw.) Schwantes	Aizoaceae	N	CA	R	.	+	+
<i>Dysphania ambrosioides</i> (L.) Mosyakin & Clemants	Amaranthaceae	N	SA	C	+	+	+
<i>Dysphania anthelmintica</i> (L.) Mosyakin & Clemants	Amaranthaceae	N	SA	R	.	.	+
<i>Dysphania multifida</i> (L.) Mosyakin & Clemants	Amaranthaceae	N	SA	C	.	.	+
<i>Dysphania pumilio</i> (R. Br.) Mosyakin & Clemants	Amaranthaceae	C	AU	C	.	.	+
<i>Echinochloa colonum</i> (L.) Link	Poaceae	N	AS, AF	C	+	+	+
<i>Echinochloa crus-galli</i> (L.) P. Beauv. subsp. <i>hispidula</i> (Retz.) Honda	Poaceae	C	AS, AF	S	.	.	+
<i>Echinochloa frumentacea</i> Link	Poaceae	C	Cult	R	.	.	+
<i>Echinochloa oryzicola</i> (Vasinger) Vasinger	Poaceae	C	AS	L	.	+	+
<i>Echinochloa oryzoides</i> (Ard.) Fritsch	Poaceae	C	AS, AF	L	.	+	+
<i>Echinopsis eyriessi</i> (Turpin) Pfeiff. & Otto	Cactaceae	C	SA	R	.	+	.
<i>Echinopsis oxygona</i> (Link) Zucc.	Cactaceae	C	SA	R	.	+	.
<i>Eclipta prostrata</i> (L.) L.	Asteraceae	N	SA	L	.	+	+
<i>Egeria densa</i> Planch.	Hydrocharitaceae	N	SA	R	+	.	+
<i>Ehrharta calycina</i> Sm.	Poaceae	C	CA	R	.	.	+
<i>Ehrharta erecta</i> Lam.	Poaceae	C	CA	R	.	.	+
<i>Ehrharta longiflora</i> Sm.	Poaceae	N	CA	R	.	.	+
<i>Eichhornia crassipes</i> (Mart.) Solms.	Pontederiaceae	N	SA	R	.	.	+
<i>Elaeagnus angustifolia</i> L.	Elaeagnaceae	C	WP	R	.	.	+
<i>Eleocharis bonariensis</i> Nees	Cyperaceae	C	SA	R	.	.	+
<i>Eleocharis parvula</i> (Roem. & Schult.) Bluff, Nees & Schauer	Cyperaceae	C	NA	R	.	.	+
<i>Eleusine indica</i> (L.) Gaertn. subsp. <i>indica</i>	Poaceae	N	AS, AF	C	+	+	+
<i>Eleusine tristachya</i> (Lam.) Lam.	Poaceae	I	SA	C	+	+	+
<i>Elodea canadensis</i> Michx.	Hydrocharitaceae	N	NA	R	+	.	+
<i>Elymus hispidus</i> (Opiz) Melderis subsp. <i>barbulatus</i> (Schur) Melderis	Poaceae	C	WP	R	.	.	+
<i>Elymus obtusiflorus</i> (DC.) Conert	Poaceae	N	WP	S	+	+	+
<i>Enneapogon cenchroides</i> (Roem. & Schult.) C.E. Hubb.	Poaceae	C	AF, AS	R	.	.	+
<i>Epilobium brachycarpum</i> C. Presl	Onagraceae	N	NA	R	+	.	+
<i>Epilobium ciliatum</i> Raf. subsp. <i>ciliatum</i>	Onagraceae	I	NA	L	+	.	.
<i>Eragrostis curvula</i> (Schrud.) Nees	Poaceae	N	CA	C	+	+	+
<i>Eragrostis mexicana</i> (Hornem.) Link	Poaceae	N	NA, SA	S	.	.	+
<i>Eragrostis pectinacea</i> (Michx.) Nees	Poaceae	C	NA, SA	R	.	.	+
<i>Erigeron annuus</i> (L.) Desf.	Asteraceae	I	NA	C	+	+	+
<i>Erigeron bonariensis</i> L.	Asteraceae	I	SA	C	+	+	+
<i>Erigeron canadensis</i> L.	Asteraceae	I	NA	C	+	+	+
<i>Erigeron floribundus</i> (Kunth) Sch. Bip.	Asteraceae	N	SA	C	.	+	+
<i>Erigeron karvinskianus</i> DC.	Asteraceae	I	SA	L	+	+	+
<i>Erigeron primulifolius</i> (Lam.) Greuter	Asteraceae	C	SA	V	.	.	+
<i>Erigeron sumatrensis</i> Retz.	Asteraceae	I	SA	C	+	+	+
<i>Eriobotrya japonica</i> (Thunb.) Lindl.	Rosaceae	C	AS	S	.	.	+
<i>Eriocephalus africanus</i> L.	Asteraceae	C	CA	R	.	.	+
<i>Erodium botrys</i> (Cav.) Bertol.	Geraniaceae	C	ME	S	.	.	+
<i>Ervilia articulata</i> (Hornem.) H. Schaefer	Fabaceae	N	ME	S	.	.	+
<i>Ervilia sativa</i> Link	Fabaceae	C	ME	S	+	+	+
<i>Erysimum cheiri</i> (L.) Crantz	Brassicaceae	N	ME	S	+	+	+
<i>Erysimum repandum</i> L.	Brassicaceae	C	WP	R	.	.	.
<i>Erythranthe gutatta</i> (DC.) G.L. Nesom	Phrymaceae	N	NA	R	.	+	.
<i>Erythrostemon gilliesii</i> (Hook.) Klotzsch	Fabaceae	C	SA	R	.	+	+
<i>Eschscholzia californica</i> Cham.	Papaveraceae	N	NA	S	+	+	+
<i>Eucalyptus camaldulensis</i> Dehnh.	Myrtaceae	C	AU	S	.	.	+
<i>Eucalyptus dalrympleana</i> Maiden	Myrtaceae	C	AU	R	.	.	+
<i>Eucalyptus globulus</i> Labill.	Myrtaceae	C	AU	S	.	.	+
<i>Eucalyptus gunnii</i> Hook. f.	Myrtaceae	C	AU	R	.	.	+
<i>Eucalyptus viminalis</i> Labill.	Myrtaceae	C	AU	R	.	.	+
<i>Euonymus japonicus</i> Thunb.	Celastraceae	C	AS	R	.	+	+
<i>Euphorbia chamaesyce</i> L. subsp. <i>chamaesyce</i>	Euphorbiaceae	N	ME	L	+	+	+
<i>Euphorbia davidii</i> Subils	Euphorbiaceae	N	NA	R	.	.	+
<i>Euphorbia glyptosperma</i> Engelm.	Euphorbiaceae	N	NA	R	.	+	.

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					Pyr.	In	Lit
<i>Euphorbia humifusa</i> Willd.	Euphorbiaceae	N	AS	R	.	.	+
<i>Euphorbia hypericifolia</i> L.	Euphorbiaceae	C	SA	R	.	.	+
<i>Euphorbia lathyris</i> L.	Euphorbiaceae	N	ME	C	+	+	+
<i>Euphorbia maculata</i> L.	Euphorbiaceae	I	NA	C	+	+	+
<i>Euphorbia marginata</i> Pursh.	Euphorbiaceae	C	NA	S	.	+	+
<i>Euphorbia nutans</i> Lag.	Euphorbiaceae	I	NA	C	+	+	+
<i>Euphorbia prostrata</i> Aiton	Euphorbiaceae	I	NA	C	+	+	+
<i>Euphorbia saratoi</i> Ard.	Euphorbiaceae	N	WP	R	.	+	+
<i>Euphorbia serpens</i> Kunth	Euphorbiaceae	N	SA	C	+	+	+
<i>Euryops pectinatus</i> (L.) Cass. × <i>E. chysanthemoides</i> (DC.) B. Nord.	Asteraceae	Cult	CA	R	.	.	+
<i>Fagonia cretica</i> L.	Zygophyllaceae	N	ME	R	.	.	+
<i>Fagopyrum esculentum</i> Moench	Polygonaceae	C	AS	S	+	+	+
<i>Fagopyrum tataricum</i> (L.) Gaertn.	Polygonaceae	C	AS	S	+	.	+
<i>Fallopia baldschuanica</i> (Regel) Holub	Polygonaceae	I	AS	C	+	+	+
<i>Fallopia japonica</i> (Houtt.) Ronse Decr.	Polygonaceae	N	AS	R	+	.	+
<i>Felicia filifolia</i> (Vent.) Burt Davy	Asteraceae	C	CA	R	.	.	+
<i>Ferula communis</i> L. subsp. <i>communis</i>	Apiaceae	N	ME	R	.	.	+
<i>Festuca stricta</i> Host subsp. <i>trachyphylla</i> (Hack.) Joch. Müll.	Poaceae	C	WP	R	.	+	.
<i>Festuca valesiaca</i> Gaudin	Poaceae	N	WP	R	.	.	+
<i>Ficus carica</i> L.	Moraceae	I	ME	C	+	+	+
<i>Ficus elastica</i> Hornem.	Moraceae	C	AS	R	.	.	+
<i>Ficus rubiginosa</i> Vent.	Moraceae	C	AU	R	.	.	+
<i>Fimbristylis bisumbellata</i> (Forssk.) Bubani	Cyperaceae	C	AF, AS	V	.	.	+
<i>Forsythia intermedia</i> Zabel	Oleaceae	C	AS	R	+	.	.
<i>Forsythia suspensa</i> (Thumb.) Vahl	Oleaceae	C	AS	R	.	+	.
<i>Fragaria ×ananassa</i> (Weston) Duchesne	Rosaceae	C	Cult	R	+	+	+
<i>Fragaria ×intermedia</i> (Bach) Beck	Rosaceae	C	Cult	R	.	.	+
<i>Fraxinus americana</i> L.	Oleaceae	N	NA	R	+	+	?
<i>Fraxinus ornus</i> L.	Oleaceae	I	ME	L	+	+	+
<i>Fraxinus pennsylvanica</i> Marshall	Oleaceae	N	NA	R	.	+	+
<i>Freesia leichtlinii</i> Klatt subsp. <i>alba</i> (G.L. Mey.) J.C. Manning & Goldblatt	Iridaceae	N	CA	S	.	.	+
<i>Freesia leichtlinii</i> Klatt × <i>F. corymbosa</i> (Burm. f.) N.E. Br.	Iridaceae	C	Cult	R	.	.	+
<i>Gagea villosa</i> (M. Bieb.) Sweet	Liliaceae	N	WP	C	+	+	+
<i>Gaillardia aristata</i> Pursh	Asteraceae	C	NA	R	+	+	+
<i>Galega officinalis</i> L.	Fabaceae	N	ME	R	+	+	+
<i>Galinsoga parviflora</i> Cav.	Asteraceae	N	SA	C	+	+	+
<i>Galinsoga quadriradiata</i> Ruiz & Pav.	Asteraceae	N	SA	C	+	+	+
<i>Galium tricornerutum</i> Dandy	Rubiaceae	N	ME	C	+	+	+
<i>Gamochaeta coarctata</i> (Willd.) Kerguélen	Asteraceae	N	NA, SA	L	.	.	+
<i>Gamochaeta subfalcata</i> (Cabrera) Cabrera	Asteraceae	N	SA	S	.	.	+
× <i>Gasteraloe beguinii</i> (Radl.) Guillaumin	Asphodelaceae	C	Cult	R	.	.	+
<i>Gasteria carinata</i> (Mill.) Duval	Asphodelaceae	C	CA	R	.	.	+
<i>Gazania rigens</i> (L.) Gaertn.	Asteraceae	N	CA	L	.	.	+
<i>Gladiolus italicus</i> Mill.	Iridaceae	N	ME	C	+	+	+
<i>Glandularia aristigera</i> (S. Moore) Tronc.	Verbenaceae	C	SA	R	.	.	+
<i>Glebionis segetum</i> (L.) Fourr.	Asteraceae	N	ME	C	+	+	+
<i>Gleditsia triacanthos</i> L.	Fabaceae	N	NA	S	+	+	+
<i>Glottiphyllum longum</i> (Haw.) N.E. Br.	Aizoaceae	N	CA	S	.	.	+
<i>Glycine max</i> (L.) Merr.	Fabaceae	C	AS	R	.	.	+
<i>Gomphocarpus fruticosus</i> (L.) W.T. Aiton	Apocynaceae	N	CA	C	.	+	+
<i>Graptopetalum paraguayense</i> (N.E. Br.) E. Walther	Crassulaceae	N	NA	R	.	+	+
<i>Guizotia abyssinica</i> (L. f.) Cass.	Asteraceae	N	Cult	S	+	.	+
<i>Gypsophila elegans</i> M. Bieb.	Caryophyllaceae	C	WP	R	+	.	.
<i>Gypsophila paniculata</i> L.	Caryophyllaceae	C	WP	V	.	.	+
<i>Halogeton sativus</i> (L.) Moq.	Amaranthaceae	C	ME	V	.	.	+
<i>Haworthiopsis attenuata</i> (Haw.) G.D. Rowley	Asphodelaceae	C	AF	R	.	.	+
<i>Hedera hibernica</i> (G. Kirchn.) Carrière	Araliaceae	N	WP	S	+	+	+
<i>Hedera maroccana</i> McAll.	Araliaceae	N	ME	L	+	+	+
<i>Hedysarum coronarium</i> L.	Fabaceae	C	ME	S	.	.	+
<i>Helianthus annuus</i> L.	Asteraceae	C	NA	C	+	+	+
<i>Helianthus tuberosus</i> L.	Asteraceae	I	NA	C	+	+	+
<i>Helianthus ×laetiflorus</i> Pers.	Asteraceae	N	NA	R	.	.	.
<i>Helichrysum orientale</i> (L.) Vaill.	Asteraceae	C	ME	R	.	+	+

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					Pyr.	In	Lit
<i>Heliotropium amplexicaulis</i> Vahl	Boraginaceae	C	SA	R	.	.	+
<i>Heliotropium curassavicum</i> L.	Boraginaceae	N	SA	L	.	.	+
<i>Helleborus niger</i> L.	Ranunculaceae	C	WP	R	.	+	.
<i>Hemerocallis fulva</i> (L.) L.	Asphodelaceae	N	AS	L	+	+	+
<i>Heraclium mantegazzianum</i> Sommier & Levier	Apiaceae	N	WP	S	+	.	.
<i>Hermodactylus tuberosus</i> (L.) Mill.	Iridaceae	C	ME	R	.	.	+
<i>Hesperis matronalis</i> L. subsp. <i>matronalis</i>	Brassicaceae	N	WP	S	+	+	+
<i>Hesperocyparis arizonica</i> (Greene) Bartel	Cupressaceae	N	NA	R	+	+	+
<i>Hesperocyparis macrocarpa</i> (Hartw.) Bartel	Cupressaceae	C	NA	R	.	+	+
<i>Heteranthera limosa</i> (Sw.) Willd.	Pontederiaceae	N	SA	L	.	+	+
<i>Heteranthera reniformis</i> Ruiz & Pav.	Pontederiaceae	N	SA	L	.	.	+
<i>Hibiscus trionum</i> L.	Malvaceae	N	AS, AF	S	.	+	+
<i>Hippeastrum vittatum</i> (L'Hér.) Herb.	Amaryllidaceae	C	SA	R	+	.	.
<i>Hordeum vulgare</i> L. subsp. <i>distichon</i> (L.) Körn.	Poaceae	N	Cult	S	+	+	+
<i>Hordeum vulgare</i> L. subsp. <i>vulgare</i>	Poaceae	N	Cult	S	+	+	+
<i>Hyacinthoides ×massartiana</i> Geerinck	Asparagaceae	C	Cult.	R	+	.	.
<i>Hyacinthus orientalis</i> L.	Asparagaceae	C	ME	S	.	+	+
<i>Hydrocotyle verticillata</i> Thunb.	Araliaceae	N	SA	R	.	.	+
<i>Hylocereus undatus</i> (Haw.) Britton & Rose	Cactaceae	C	SA	R	.	.	+
<i>Hylotelephium spectabile</i> (Boreau) H. Ohba	Crassulaceae	C	AS	R	.	+	.
<i>Hypericum calycinum</i> L.	Hypericaceae	N	ME	R	.	+	+
<i>Hypericum canariense</i> L.	Hypericaceae	C	WP	R	.	.	+
<i>Hypericum hircinum</i> L. subsp. <i>majus</i> (Aiton) N. Robson	Hypericaceae	C	ME	V	.	.	+
<i>Hypericum triquetrifolium</i> Turra	Hypericaceae	C	ME	V	.	.	+
<i>Impatiens balfourii</i> Hook. f.	Balsaminaceae	I	AS	C	+	+	+
<i>Impatiens balsamina</i> L.	Balsaminaceae	C	AS	R	.	+	+
<i>Impatiens glandulifera</i> Royle	Balsaminaceae	I	AS	L	+	+	.
<i>Inula helenium</i> L. subsp. <i>helenium</i>	Asteraceae	N	WP	S	+	+	+
<i>Ipomoea hederacea</i> Jacq.	Convolvulaceae	N	SA	R	.	+	.
<i>Ipomoea indica</i> (Burm.) Merr.	Convolvulaceae	N	SA	C	.	+	+
<i>Ipomoea purpurea</i> (L.) Roth	Convolvulaceae	N	SA	C	+	+	+
<i>Ipomoea sagittata</i> Poir.	Convolvulaceae	I	SA	L	.	.	+
<i>Iris albicans</i> Lange	Iridaceae	C	ME	R	.	.	?
<i>Iris ×germanica</i> L.	Iridaceae	I	Cult	C	+	+	+
<i>Iris ×sambucina</i> L.	Iridaceae	C	Cult.	R	+	.	.
<i>Isatis tinctoria</i> L. subsp. <i>tinctoria</i>	Brassicaceae	N	WP	L	+	+	+
<i>Jacaranda mimosifolia</i> D. Don.	Bignoniaceae	C	SA	R	.	.	+
<i>Jarava plumosa</i> (Spreng.) S.W.L. Jacobs & J. Everet	Poaceae	N	SA	L	.	.	+
<i>Jasminum nudiflorum</i> Lindl.	Oleaceae	N	AS	R	.	+	+
<i>Jasminum officinale</i> L.	Oleaceae	C	AS	S	+	+	+
<i>Juglans nigra</i> L.	Juglandaceae	C	NA	R	.	+	.
<i>Juglans regia</i> L.	Juglandaceae	I	WP	C	+	+	+
<i>Juncus tenuis</i> Willd.	Juncaceae	N	NA	C	+	.	+
<i>Juniperus chinensis</i> L.	Cupressaceae	C	AS	R	.	+	.
<i>Juniperus macrocarpa</i> Sm.	Cupressaceae	C	ME	R	.	.	+
<i>Kalanchoe fedtschenkoi</i> Raym.-Hamet & H. Perrier	Crassulaceae	C	AF	R	.	.	+
<i>Kalanchoe sexangularis</i> N.E. Br.	Crassulaceae	C	AF	R	.	.	+
<i>Kalanchoe tubiflora</i> (Harv.) Raym.-Hamet	Crassulaceae	N	AF	R	.	.	+
<i>Kalanchoe ×houghtonii</i> D.B. Ward	Crassulaceae	N	Cult	L	.	.	+
<i>Kerria japonica</i> (L.) DC.	Rosaceae	C	AS	R	+	.	.
<i>Kleinia mandraliscae</i> Tineo	Asteraceae	C	CA	R	.	.	+
<i>Kleinia repens</i> (L.) Haw.	Asteraceae	C	CA	R	.	.	+
<i>Kniphofia praecox</i> Baker	Asphodelaceae	C	CA	R	.	+	.
<i>Koelreuteria paniculata</i> Laxm.	Sapindaceae	C	AS	S	+	+	+
<i>Kundmannia sicula</i> (L.) DC.	Apiaceae	C	ME	R	.	.	+
<i>Laburnum anagyroides</i> Medik.	Fabaceae	N	WP	S	+	+	+
<i>Lactuca sativa</i> L.	Asteraceae	C	Cult	S	+	.	.
<i>Lamium galeobdolon</i> (L.) Crantz subsp. <i>argentatum</i> (Smekjal) J. Duvig.	Lamiaceae	C	WP	R	+	.	.
<i>Lampranthus aureus</i> (L.) N.E. Br.	Aizoaceae	C	CA	R	.	.	+
<i>Lampranthus multiradiatus</i> (Jacq.) N.E. Br.	Aizoaceae	N	CA	S	.	.	+
<i>Lantana camara</i> L. aggr.	Verbenaceae	N	Cult	L	.	.	+
<i>Lantana montevidensis</i> (Spreng.) Briq.	Verbenaceae	C	SA	R	.	.	+
<i>Larix ×marschlii</i> Coaz	Pinaceae	C	Cult	R	+	.	?

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Lathyrus odoratus</i> L.	Fabaceae	C	ME	R	.	+	+
<i>Lathyrus oleraceus</i> Lam. subsp. <i>oleraceus</i>	Fabaceae	C	Cult	R	.	.	+
<i>Lathyrus sativus</i> L.	Fabaceae	C	Cult	S	+	+	+
<i>Lathyrus tingitanus</i> L.	Fabaceae	I	ME	C	.	.	+
<i>Lathyrus tuberosus</i> L.	Fabaceae	N	WP	L	+	+	+
<i>Lavandula dentata</i> L.	Lamiaceae	C	ME	S	.	.	+
<i>Legousia pentagonia</i> (L.) Druce	Campanulaceae	C	ME	R	.	.	+
<i>Lemna minuta</i> Kunth	Araceae	N	NA, SA	S	.	+	+
<i>Lemna valdiviana</i> Phil.	Araceae	N	NA, SA	L	.	+	.
<i>Leonotis leonurus</i> (L.) R. Br.	Lamiaceae	C	CA	R	.	.	+
<i>Leonurus cardiaca</i> L.	Lamiaceae	C	WP	V	+	.	+
<i>Lepidium bonariense</i> L.	Brassicaceae	N	SA	L	.	.	+
<i>Lepidium densiflorum</i> Schrad.	Brassicaceae	C	NA	R	.	.	+
<i>Lepidium didymum</i> L.	Brassicaceae	N	SA	C	+	+	+
<i>Lepidium draba</i> L. subsp. <i>draba</i>	Brassicaceae	N	ME	C	+	+	+
<i>Lepidium latifolium</i> L.	Brassicaceae	N	ME	S	+	+	+
<i>Lepidium perfoliatum</i> L.	Brassicaceae	C	WP	V	.	.	+
<i>Lepidium sativum</i> L.	Brassicaceae	C	ME	V	+	+	+
<i>Lepidium virginicum</i> L. subsp. <i>virginicum</i>	Brassicaceae	I	NA	L	+	+	+
<i>Leucaena leucocephala</i> (Lam.) de Wit subsp. <i>glabrata</i> (Rose) Zárate	Fabaceae	N	SA	R	.	.	+
<i>Leucocjum aestivum</i> L. subsp. <i>aestivum</i>	Amaryllidaceae	N	ME	R	.	.	+
<i>Levisticum officinale</i> W.D.J. Koch	Apiaceae	C	ME	V	+	.	+
<i>Ligustrum lucidum</i> W.T. Aiton	Oleaceae	I	AS	L	+	+	+
<i>Ligustrum ovalifolium</i> Hassk.	Oleaceae	C	AS	R	+	.	+
<i>Ligustrum sinense</i> Lour.	Oleaceae	C	AS	R	.	+	.
<i>Lilium candidum</i> L.	Liliaceae	N	ME	S	+	+	+
<i>Limonium sinuatum</i> (L.) Mill.	Plumbaginaceae	C	ME	R	.	.	+
<i>Linaria spartea</i> (L.) Chaz.	Plantaginaceae	C	ME	R	.	.	+
<i>Linaria viscosa</i> (L.) Chaz. subsp. <i>viscosa</i>	Plantaginaceae	C	ME	R	.	.	+
<i>Linaria</i> × <i>versicolor</i> (Jacq.) Chaz.	Plantaginaceae	C	Cult	R	.	+	?
<i>Lindernia dubia</i> (L.) Pennell	Scrophulariaceae	N	NA	L	.	+	+
<i>Linum grandiflorum</i> Desf.	Linaceae	C	ME	R	+	.	+
<i>Linum usitatissimum</i> L.	Linaceae	C	Cult	S	+	+	+
<i>Liquidambar styraciflua</i> L.	Altingiaceae	C	NA	R	+	.	.
<i>Lobelia laxiflora</i> Kunth subsp. <i>angustifolia</i> (A. DC.) Eakes & Lammers	Campanulaceae	C	NA	R	.	.	+
<i>Lolium multiflorum</i> Lam.	Poaceae	N	WP	C	+	+	+
<i>Lolium temulentum</i> L.	Poaceae	N	ME	C	+	+	+
<i>Lonicera fragrantissima</i> Lindl. & Paxton	Caprifoliaceae	N	AS	R	.	.	+
<i>Lonicera japonica</i> Thunb.	Caprifoliaceae	I	AS	C	+	+	+
<i>Lotus creticus</i> L.	Fabaceae	N	ME	R	.	.	+
<i>Ludwigia hexapetala</i> (Hook. & Arn.) Zardini, H.Y. Gu & P.H. Raven	Onagraceae	N	SA	R	.	.	+
<i>Ludwigia peploides</i> (Kunth) P.H. Raven subsp. <i>montevidensis</i> (Spreng.) P.H. Raven	Onagraceae	I	SA	L	.	.	+
<i>Lunaria annua</i> L. subsp. <i>annua</i>	Brassicaceae	N	ME	C	+	+	+
<i>Lupinus albus</i> L.	Fabaceae	C	Cult	V	.	.	+
<i>Lupinus</i> × <i>regalis</i> Bergmans	Fabaceae	C	Cult	R	+	.	.
<i>Lycianthes rantonnetii</i> (Carrière) Bitter	Solanaceae	C	SA	R	.	.	+
<i>Lycium barbarum</i> L.	Solanaceae	C	AS	R	.	.	+
<i>Lycium chinense</i> Mill.	Solanaceae	C	AS	R	+	.	+
<i>Lycium cinereum</i> Thunb.	Solanaceae	C	CA	R	.	+	.
<i>Lycopsis orientalis</i> L.	Boraginaceae	C	ME	R	+	.	.
<i>Maclura pomifera</i> (Raf.) C.K. Schneid.	Moraceae	C	NA	R	.	+	+
<i>Mahonia</i> × <i>decumbens</i> Stace	Berberidaceae	N	Cult	S	+	+	+
<i>Mahonia japonica</i> (Thunb.) DC.	Berberidaceae	C	AS	R	.	.	+
<i>Malcolmia maritima</i> (L.) R. Br.	Brassicaceae	C	ME	R	.	.	+
<i>Malephora purpureo-crocea</i> (Haw.) Schwantes	Aizoaceae	N	CA	S	.	.	+
<i>Malephora uitenhagensis</i> (L. Bolus) H. Jacobsen & Schwantes	Aizoaceae	N	CA	R	.	.	+
<i>Malope trifida</i> Cav.	Malvaceae	C	ME	R	.	+	+
<i>Malus domestica</i> (Borkh.) Borkh.	Rosaceae	C	Cult	C	+	+	+
<i>Malva hispanica</i> L.	Malvaceae	C	ME	V	.	.	+
<i>Malva longiflora</i> (Boiss. & Reut.) B. Bock	Malvaceae	C	ME	V	.	.	+
<i>Malva punctata</i> (All.) Alef.	Malvaceae	C	ME	R	.	.	+
<i>Malva trimestris</i> (L.) Salisb.	Malvaceae	C	ME	V	.	+	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Malva verticillata</i> L.	Malvaceae	C	AS	V	.	.	+
<i>Mammillaria elongata</i> DC.	Cactaceae	C	NA	R	.	+	.
<i>Manihot grahamii</i> Hook.	Euphorbiaceae	C	SA	R	.	.	+
<i>Matricaria discoidea</i> DC. subsp. <i>discoidea</i>	Asteraceae	N	AS, NA	C	+	+	+
<i>Matthiola incana</i> (L.) R. Br. subsp. <i>incana</i>	Brassicaceae	N	ME	C	+	.	+
<i>Matthiola lunata</i> DC.	Brassicaceae	C	ME	R	+	.	.
<i>Medicago arborea</i> L.	Fabaceae	C	ME	L	.	.	+
<i>Medicago falcata</i> L.	Fabaceae	N	ME	L	+	+	+
<i>Medicago intertexta</i> (L.) Mill.	Fabaceae	C	ME	V	.	.	?
<i>Medicago sativa</i> L. subsp. <i>sativa</i>	Fabaceae	N	Cult	C	+	+	+
<i>Medicago</i> × <i>varia</i> Martyn	Fabaceae	C	Hyb	R	.	.	+
<i>Melia azedarach</i> L.	Meliaceae	C	AS	S	.	+	+
<i>Melica chilensis</i> J. Presl	Poaceae	N	SA	R	.	.	+
<i>Melissa officinalis</i> L.	Lamiaceae	N	ME	C	+	+	+
<i>Melomphis arabica</i> (L.) Raf.	Asparagaceae	C	ME	S	+	+	+
<i>Mentha spicata</i> L.	Lamiaceae	N	WP	S	+	+	+
<i>Mentha</i> × <i>gracilis</i> Sole	Lamiaceae	C	Cult	R	.	.	+
<i>Mentha</i> × <i>piperita</i> L.	Lamiaceae	N	Cult	R	+	.	+
<i>Mercurialis annua</i> L.	Euphorbiaceae	N	WP	C	+	+	+
<i>Mesembryanthemum cordifolium</i> L. f.	Aizoaceae	N	CA	L	.	.	+
<i>Mesembryanthemum crystallinum</i> L.	Aizoaceae	C	CA	R	.	.	+
<i>Mesembryanthemum lancifolium</i> (L. Bolus) Klak	Aizoaceae	C	CA	R	.	.	+
<i>Mesembryanthemum cordifolium</i> L. f. × <i>M. haeckelianum</i> A. Berger	Aizoaceae	N	Cult	L	.	+	+
<i>Mespilus germanica</i> L.	Rosaceae	N	WP	L	+	+	+
<i>Minuartia montana</i> L. subsp. <i>montana</i>	Caryophyllaceae	C	ME	V	.	?	+
<i>Mirabilis jalapa</i> L.	Nyctaginaceae	N	SA	C	+	+	+
<i>Moricandia moricandioides</i> (Boiss.) Heywood subsp. <i>moricandioides</i>	Brassicaceae	C	ME	R	.	.	+
<i>Morus alba</i> L.	Moraceae	N	AS	L	+	+	+
<i>Morus kagayamae</i> Koidz.	Moraceae	C	AS	R	.	.	+
<i>Morus nigra</i> L.	Moraceae	C	AS	S	.	+	+
<i>Muehlenbeckia sagittifolia</i> (Ortega) Meisn.	Polygonaceae	N	SA	R	.	.	+
<i>Muhlenbergia schreberi</i> J. F. Gmel.	Poaceae	N	NA	R	.	.	+
<i>Muscari armeniacum</i> Baker	Asparagaceae	C	ME	R	.	.	+
<i>Muscari latifolium</i> J. Kink	Asparagaceae	C	ME	R	.	.	+
<i>Myagrum perfoliatum</i> L.	Brassicaceae	C	ME	V	.	+	.
<i>Myoporum laetum</i> G. Forst.	Scrophulariaceae	N	AU	L	.	.	+
<i>Myriophyllum aquaticum</i> (Vell.) Verdc.	Haloragaceae	N	SA	R	.	+	.
<i>Najas gracillima</i> (Engelm.) Magnus	Hydrocharitaceae	N	AS	R	.	.	+
<i>Narcissus jonquilla</i> L.	Amaryllidaceae	C	ME	R	.	.	+
<i>Narcissus</i> × <i>cyclazetta</i> Chater & Stace	Amaryllidaceae	C	Cult	R	.	+	.
<i>Narcissus</i> × <i>medioluteus</i> Mill.	Amaryllidaceae	C	Cult	R	.	.	+
<i>Nassella neesiana</i> (Trin. & Rupr.) Barkworth	Poaceae	N	SA	C	.	.	+
<i>Nassella tenuissima</i> (Trin.) Barkworth	Poaceae	N	NA, SA	R	.	.	+
<i>Nassella trichotoma</i> (Nees) Arechav.	Poaceae	N	SA	L	.	.	+
<i>Nemophila menziesii</i> Hook. & Arn.	Boraginaceae	C	NA	R	+	.	.
<i>Nepeta cataria</i> L.	Lamiaceae	N	ME	C	+	+	+
<i>Nepeta racemosa</i> Lam.	Lamiaceae	C	WP	R	+	.	.
<i>Nephrolepis cordifolia</i> (L.) C. Presl	Nephrolepidaceae	N	AS, AU, AS, SA	R	.	.	+
<i>Neslia paniculata</i> (L.) Desv. subsp. <i>thracica</i> (Velen.) Bormm.	Brassicaceae	N	ME	C	+	+	+
<i>Nicandra physalodes</i> (L.) Gaertn.	Solanaceae	C	SA	R	.	.	+
<i>Nicotiana glauca</i> Graham	Solanaceae	N	SA	L	+	+	+
<i>Nicotiana longiflora</i> Cav.	Solanaceae	C	SA	R	.	.	+
<i>Nicotiana rustica</i> L.	Solanaceae	C	NA	R	+	.	+
<i>Nicotiana tabacum</i> L.	Solanaceae	C	Cult	R	.	.	+
<i>Nonea lutea</i> (Desr.) DC.	Boraginaceae	C	WP	R	.	.	+
<i>Nothoscordum gracile</i> (Dryand.) Stearn	Amaryllidaceae	N	SA	C	+	.	+
<i>Nymphaea marliacea</i> Lat.-Marl.	Nymphaeaceae	N	Hyb	R	.	.	+
<i>Oenanthe crocata</i> L.	Apiaceae	C	WP	R	.	.	+
<i>Oenothera biennis</i> L.	Onagraceae	I	NA	C	+	+	?
<i>Oenothera fallax</i> Renner	Onagraceae	I	Hyb	L	.	.	+
<i>Oenothera indecora</i> Cambess.	Onagraceae	N	SA	R	.	.	+
<i>Oenothera laciniata</i> Hill	Onagraceae	C	NA	R	.	.	+
<i>Oenothera lindheimeri</i> (Engelm. & A. Gray) W.L. Wagner & Hoch	Onagraceae	C	NA	R	.	.	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Oenothera oehlkersi</i> Kappus	Onagraceae	I	Hyb	L	+	.	+
<i>Oenothera rosea</i> Aiton	Onagraceae	N	SA	C	+	+	+
<i>Oenothera speciosa</i> Nutt.	Onagraceae	N	NA	R	+	.	+
<i>Oenothera glazioviana</i> Micheli	Onagraceae	I	Hyb	C	+	+	+
<i>Onobrychis viciifolia</i> Scop.	Fabaceae	N	WP	C	+	+	+
<i>Ononis mitissima</i> L.	Fabaceae	N	ME	R	.	.	+
<i>Oplismenus undulatifolius</i> (Ard.) Roem. & Schult.	Poaceae	N	WP, AS	R	.	.	+
<i>Opuntia aurantiaca</i> Lindl.	Cactaceae	I	SA	S	.	.	+
<i>Opuntia chlorotica</i> Engelm. & J.M. Bigelow	Cactaceae	C	NA	R	.	.	+
<i>Opuntia dejecta</i> Salm-Dyck	Cactaceae	C	SA	R	.	.	+
<i>Opuntia elata</i> Salm-Dyck	Cactaceae	N	SA	R	.	+	+
<i>Opuntia elatior</i> Mill.	Cactaceae	C	SA	R	.	.	+
<i>Opuntia engelmannii</i> Salm-Dyck subsp. <i>engelmannii</i>	Cactaceae	N	NA	S	.	+	+
<i>Opuntia engelmannii</i> Salm-Dyck subsp. <i>lindheimeri</i> (Engelm.) U. Guzmán & Mandujano	Cactaceae	N	NA	S	.	+	+
<i>Opuntia ficus-indica</i> (L.) Mill.	Cactaceae	I	NA	C	+	+	+
<i>Opuntia leucotricha</i> DC.	Cactaceae	C	NA	S	.	.	+
<i>Opuntia mesacantha</i> Raf. subsp. <i>mesacantha</i>	Cactaceae	I	NA	L	+	+	+
<i>Opuntia microdasys</i> (Lehm.) Pfeiff.	Cactaceae	N	NA	S	.	.	+
<i>Opuntia monacantha</i> Haw.	Cactaceae	N	SA	R	.	.	+
<i>Opuntia phaeacantha</i> Engelm.	Cactaceae	I	NA	R	.	+	+
<i>Opuntia puberula</i> Pfeiff.	Cactaceae	N	NA	R	.	.	+
<i>Opuntia robusta</i> J.C. Wendl	Cactaceae	C	NA	R	.	.	+
<i>Opuntia scheeri</i> F.A.C. Weber	Cactaceae	N	NA	S	+	+	+
<i>Opuntia stricta</i> (Haw.) Haw.	Cactaceae	I	NA	L	.	.	+
<i>Opuntia tomentosa</i> Salm-Dyck	Cactaceae	N	NA	R	.	.	+
<i>Opuntia tortispina</i> Engelm. & J.M. Bigelow	Cactaceae	N	NA	R	.	+	.
<i>Opuntia tomentosa</i> Salm-Dyck × <i>O. ficus-indica</i> (L.) Mill.	Cactaceae	N	Cult	R	.	.	+
<i>Orbea variegata</i> (L.) Haw.	Apocynaceae	C	CA	R	.	.	+
<i>Origanum majorana</i> L.	Lamiaceae	C	ME	R	.	.	+
<i>Ornithopus sativus</i> Brot.	Fabaceae	C	ME	V	?	?	?
<i>Oryza sativa</i> L.	Poaceae	C	AS	S	.	.	+
<i>Osteospermum ecklonis</i> (DC.) Norl.	Asteraceae	C	CA	S	.	.	+
<i>Oxalis articulata</i> Savigny	Oxalidaceae	N	SA	C	+	+	+
<i>Oxalis bowiei</i> G. Don	Oxalidaceae	C	CA	R	.	.	+
<i>Oxalis conorrhiza</i> Jacq.	Oxalidaceae	C	SA	V	.	.	+
<i>Oxalis corniculata</i> L.	Oxalidaceae	N	AS	C	+	+	+
<i>Oxalis debilis</i> Kunth	Oxalidaceae	N	SA	C	+	+	+
<i>Oxalis dillenii</i> Jacq.	Oxalidaceae	N	NA	R	.	+	+
<i>Oxalis latifolia</i> Kunth	Oxalidaceae	N	NA, SA	C	+	+	+
<i>Oxalis pes-caprae</i> L.	Oxalidaceae	N	CA	C	.	.	+
<i>Oxalis vallicola</i> (Rose) R. Kunth	Oxalidaceae	N	NA	C	.	.	.
<i>Pallenis maritima</i> (L.) Greuter	Asteraceae	N	ME	R	.	.	+
<i>Panicum antidotale</i> Retz.	Poaceae	C	AS	S	+	+	.
<i>Panicum capillare</i> L. subsp. <i>capillare</i>	Poaceae	N	NA	C	+	+	+
<i>Panicum capillare</i> L. subsp. <i>hillmantii</i> (Chase) Freckmann & Lelong	Poaceae	C	NA	R	.	.	+
<i>Panicum dichotomiflorum</i> Michx.	Poaceae	N	NA	C	.	+	+
<i>Panicum maximum</i> Jacq.	Poaceae	N	AF	R	.	.	+
<i>Panicum miliaceum</i> L. subsp. <i>miliaceum</i>	Poaceae	N	Cult	C	+	+	+
<i>Panicum philadelphicum</i> Trin.	Poaceae	C	NA	R	.	+	.
<i>Papaver somniferum</i> L. subsp. <i>somniferum</i>	Papaveraceae	C	Cult	S	+	+	+
<i>Paraserianthes lophanta</i> (Willd.) I.C. Niels.	Fabaceae	N	AU	R	.	.	+
<i>Parkinsonia aculeata</i> L.	Fabaceae	N	SA	S	.	.	+
<i>Parthenocissus inserta</i> (A. Kern.) Fritsch	Vitaceae	I	NA	C	+	+	+
<i>Parthenocissus tricuspidata</i> (Siebold & Zucc.) Planch.	Vitaceae	C	NA	R	.	.	+
<i>Pascalina glauca</i> Ortega	Asteraceae	C	SA	R	.	.	+
<i>Paspalum dilatatum</i> Poir.	Poaceae	I	SA	C	.	+	+
<i>Paspalum distichum</i> L. subsp. <i>distichum</i>	Poaceae	I	SA	C	+	+	+
<i>Paspalum sauriae</i> (Parodi) Parodi	Poaceae	N	SA	R	+	.	+
<i>Paspalum vaginatum</i> Sw.	Poaceae	I	SA	C	.	.	+
<i>Passiflora caerulea</i> L.	Passifloraceae	N	SA	S	.	.	+
<i>Passiflora ×belotii</i> Pépin	Passifloraceae	C	Cult	R	.	.	+
<i>Paulownia tomentosa</i> (Thunb.) Steud.	Paulowniaceae	C	AS	R	+	.	.

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					Pyr.	In	Lit
<i>Pelargonium grandiflorum</i> Andrews	Geraniaceae	C	CA	R	.	.	+
<i>Pelargonium peltatum</i> (L.) L'Hér.	Geraniaceae	C	CA	S	.	.	+
<i>Pelargonium zonale</i> (L.) L'Hér.	Geraniaceae	C	CA	S	.	.	+
<i>Pelargonium</i> × <i>hybridum</i> (L.) L'Hér.	Geraniaceae	C	CA	R	.	.	+
<i>Perilla frutescens</i> (L.) Britton	Lamiaceae	C	AS	R	.	.	+
<i>Periploca graeca</i> L.	Apocynaceae	I	ME	L	.	+	.
<i>Persicaria capitata</i> (D. Don) H. Gross	Polygonaceae	C	AS	R	.	.	+
<i>Persicaria orientalis</i> (L.) Spach	Polygonaceae	C	AS	S	+	+	+
<i>Petasites pyrenaicus</i> (L.) G. López	Asteraceae	N	ME	C	.	+	+
<i>Petroselinum crispum</i> (Mill.) Fuss.	Apiaceae	N	ME	C	+	+	+
<i>Petunia</i> × <i>hybrida</i> E. Vilm.	Solanaceae	C	Cult	S	+	+	+
<i>Phacelia tanacetifolia</i> Benth.	Boraginaceae	C	NA	S	.	+	+
<i>Phalaris canariensis</i> L.	Poaceae	N	ME	C	+	+	+
<i>Phalaris stenoptera</i> Hack.	Poaceae	N	ME	L	.	.	+
<i>Phaseolus vulgaris</i> L.	Fabaceae	C	SA	S	+	.	+
<i>Phedimus spurius</i> (M. Bieb.) 't Hart	Crassulaceae	C	AS	R	+	.	.
<i>Phelipanche ramosa</i> (L.) Pomel	Orobanchaceae	C	WP	S	.	.	+
<i>Philadelphus coronarius</i> L.	Hydrangeaceae	C	WP	S	+	.	+
<i>Phlomis fruticosa</i> L.	Lamiaceae	C	ME	R	.	.	+
<i>Phlomis purpurea</i> L.	Lamiaceae	C	ME	R	.	.	+
<i>Phoenix canariensis</i> Chabaud	Arecaceae	C	AF	S	.	.	+
<i>Phoenix dactylifera</i> L.	Arecaceae	C	ME	S	.	.	+
<i>Photinia serratifolia</i> (Desf.) Kalkman	Rosaceae	C	AS	V	.	+	.
<i>Phyla canescens</i> (Kunth) Greene	Verbenaceae	N	SA	L	.	+	+
<i>Phyllostachys aurea</i> Rivière & C. Rivière	Poaceae	N	AS	S	?	+	+
<i>Phyllostachys bambusoides</i> Siebold & Zucc.	Poaceae	N	AS	R	.	.	+
<i>Phyllostachys flexuosa</i> Rivière & C. Rivière	Poaceae	N	AS	R	?	.	+
<i>Phymosia umbellata</i> (Cav.) Kearney	Malvaceae	C	NA	R	.	.	+
<i>Physalis ixocarpa</i> Hornem.	Solanaceae	C	NA	S	.	+	+
<i>Physalis peruviana</i> L.	Solanaceae	C	SA	S	+	+	+
<i>Physalis philadelphica</i> Lam.	Solanaceae	C	NA	R	+	.	+
<i>Physalis viscosa</i> L.	Solanaceae	C	SA	R	.	+	+
<i>Phytolacca americana</i> L.	Phytolaccaceae	I	NA	C	+	+	+
<i>Phytolacca dioica</i> L.	Phytolaccaceae	C	SA	R	.	.	+
<i>Picea abies</i> (L.) H. Karst.	Pinaceae	N	WP	S	+	.	+
<i>Pimpinella anisum</i> L.	Apiaceae	C	ME	V	.	.	+
<i>Pinus brutia</i> Ten.	Pinaceae	C	ME	R	.	.	+
<i>Pinus canariensis</i> C. Sm.	Pinaceae	C	ME	R	.	.	+
<i>Pinus nigra</i> J.F. Arnold subsp. <i>nigra</i>	Pinaceae	C	WP	C	+	.	+
<i>Pinus pinea</i> L.	Pinaceae	I	ME	C	+	+	+
<i>Pinus ponderosa</i> Douglas subsp. <i>ponderosa</i>	Pinaceae	C	NA	R	+	.	.
<i>Pinus radiata</i> D. Don	Pinaceae	C	NA	C	+	.	+
<i>Pinus strobus</i> L.	Pinaceae	C	NA	R	+	.	+
<i>Pinus wallichiana</i> A.B. Jacks.	Pinaceae	C	AS	R	.	.	+
<i>Pittosporum heterophyllum</i> Franch.	Pittosporaceae	C	AS	R	.	.	+
<i>Pittosporum tobira</i> (Thunb.) W.T. Aiton	Pittosporaceae	N	AS	L	.	.	+
<i>Platanus orientalis</i> L. var. <i>acerifolia</i> Aiton	Platanaceae	N	ME	S	+	+	+
<i>Platycladus orientalis</i> (L.) Franco	Cupressaceae	C	AS	S	+	.	+
<i>Plumbago auriculata</i> Lam.	Plumbaginaceae	N	CA	S	.	.	+
<i>Poa pratensis</i> L. subsp. <i>irrigata</i> (Lindm.) H. Lindb.	Poaceae	N	WP	R	.	.	+
<i>Podranea ricasoliana</i> (Tanfani) Sprague	Bignoniaceae	C	CA	R	.	.	+
<i>Polygala myrtifolia</i> L.	Polygalaceae	C	CA	R	.	.	+
<i>Pontederia cordata</i> L.	Pontederiaceae	C	SA	R	.	.	+
<i>Populus balsamifera</i> L.	Salicaceae	C	NA	R	.	.	+
<i>Populus deltoides</i> Marshall	Salicaceae	C	NA	S	+	+	+
<i>Populus trichocarpa</i> Torrey & A. Gray	Salicaceae	C	NA	R	+	.	.
<i>Populus</i> × <i>canadensis</i> Moench	Salicaceae	C	Cult	C	+	+	+
<i>Populus</i> × <i>canescens</i> (Aiton) Sm.	Salicaceae	C	Hyb	R	+	+	?
<i>Porophyllum ruderale</i> (Jacq.) Cass.	Asteraceae	C	NA, SA	R	.	.	+
<i>Portulaca grandiflora</i> Hook.	Portulacaceae	C	SA	S	.	+	+
<i>Portulacaria afra</i> Jacq.	Portulacaceae	C	CA	R	.	.	+
<i>Potentilla indica</i> (Andrews) Th. Wolf	Rosaceae	C	AS	R	.	.	+
<i>Potentilla norvegica</i> L.	Rosaceae	N	WP	R	+	.	.

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Proboscidea louisiana</i> (Mill.) Thell.	Martyniaceae	C	NA	R	.	.	+
<i>Prunus armeniaca</i> L.	Rosaceae	C	AS	S	.	+	+
<i>Prunus cerasifera</i> Ehrh.	Rosaceae	I	WP	L	+	+	+
<i>Prunus cerasus</i> L.	Rosaceae	C	WP	R	.	.	+
<i>Prunus domestica</i> L.	Rosaceae	C	WP	L	+	+	+
<i>Prunus dulcis</i> (Mill.) D.A. Webb	Rosaceae	C	WP	S	+	+	+
<i>Prunus insititia</i> L.	Rosaceae	N	WP	L	+	+	+
<i>Prunus laurocerasus</i> L.	Rosaceae	N	WP	R	+	+	+
<i>Prunus persica</i> (L.) Batsch	Rosaceae	C	AS	S	+	+	+
<i>Prunus virginiana</i> L.	Rosaceae	N	NA	R	+	.	.
<i>Pseudosasa japonica</i> (Steud.) Nakai	Poaceae	C	AS	R	.	.	+
<i>Pseudotsuga menziesii</i> (Mirb.) Franco	Pinaceae	C	NA	S	+	.	+
<i>Ptelea trifoliata</i> L.	Rutaceae	C	NA	R	.	.	+
<i>Pteris cretica</i> L.	Pteridaceae	C	ME, AS, AU, AS, NA, SA	V	.	.	+
<i>Pteris vittata</i> L.	Pteridaceae	C	ME, AS, AU, AS, SA	R	.	.	+
<i>Puccinellia distans</i> (Jacq.) Parl. subsp. <i>distans</i>	Poaceae	C	WP	R	.	+	+
<i>Punica granatum</i> L.	Lythraceae	N	WP	C	+	+	+
<i>Pyracantha angustifolia</i> (Franch.) C.K. Schneid.	Rosaceae	N	AS	L	+	+	+
<i>Pyracantha coccinea</i> M. Roem.	Rosaceae	N	WP	L	+	+	+
<i>Pyracantha fortuneana</i> (Maxim.) H.L. Li	Rosaceae	N	AS	L	+	+	+
<i>Pyrus communis</i> L.	Rosaceae	N	WP	L	+	+	+
<i>Quercus rubra</i> L.	Fagaceae	C	NA	R	+	.	+
<i>Raphanus raphanistrum</i> L. subsp. <i>sativus</i> (L.) Domin	Brassicaceae	C	Cult	R	+	.	+
<i>Reseda odorata</i> L.	Resedaceae	C	ME	V	.	.	+
<i>Retama monosperma</i> (L.) Boiss.	Fabaceae	N	ME	S	.	+	+
<i>Rhaponticum repens</i> (L.) Hidalgo	Asteraceae	N	WP	R	.	.	+
<i>Rhodalsine geniculata</i> (Poir.) F.N. Williams	Caryophyllaceae	C	ME	V	.	+	+
<i>Rhus coriaria</i> L.	Anacardiaceae	C	ME	S	+	.	+
<i>Rhus typhina</i> L.	Anacardiaceae	N	NA	R	+	.	.
<i>Ribes rubrum</i> L.	Grossulariaceae	C	WP	R	+	.	+
<i>Ricinus communis</i> L.	Euphorbiaceae	N	AF	C	+	+	+
<i>Ridolfia segetum</i> (L.) Moris	Apiaceae	N	ME	S	.	.	+
<i>Robinia pseudoacacia</i> L.	Fabaceae	I	NA	C	+	+	+
<i>Rosa gallica</i> L.	Rosaceae	N	WP	S	+	+	+
<i>Rosa moschata</i> Herrm.	Rosaceae	N	WP	L	+	.	+
<i>Rosa multiflora</i> Thunb.	Rosaceae	N	AS	R	+	.	+
<i>Rosa ×scholapiorum</i> Sennen	Rosaceae	C	Hyb	R	.	.	+
<i>Rosa ×suarezii</i> Sennen	Rosaceae	C	Hyb	R	.	.	+
<i>Rubia tinctorum</i> L.	Rubiaceae	I	WP	L	+	+	+
<i>Rudbeckia hirta</i> L.	Asteraceae	C	NA	R	+	.	+
<i>Rudbeckia laciniata</i> L.	Asteraceae	C	NA	R	.	+	.
<i>Rumex cristatus</i> DC.	Polygonaceae	N	ME	L	.	+	+
<i>Rumex patientia</i> L.	Polygonaceae	N	WP	L	+	.	+
<i>Ruschia caroli</i> (L. Bolus) Schwantes	Aizoaceae	N	CA	R	.	.	+
<i>Ruscus ×microglossus</i> Bertol.	Asparagaceae	N	Cult	R	.	.	+
<i>Ruta chalepensis</i> L.	Rutaceae	C	ME	L	.	+	+
<i>Ruta graveolens</i> L.	Rutaceae	C	ME	R	+	+	+
<i>Sagittaria montevidensis</i> Cham. & Schltldl. subsp. <i>calycina</i> (Engelm.) Bogin	Alismataceae	N	SA	R	.	.	+
<i>Salix babylonica</i> L.	Salicaceae	C	AS	S	.	+	+
<i>Salix pentandra</i> L.	Salicaceae	C	WP	R	+	.	.
<i>Salix viminalis</i> L.	Salicaceae	C	WP	R	.	.	.
<i>Salix ×fragilis</i> L.	Salicaceae	N	Cult	C	+	+	+
<i>Salix ×rubra</i> Huds.	Salicaceae	C	Hyb	R	+	+	+
<i>Salix ×sepulcralis</i> Simonk.	Salicaceae	C	Hyb	S	.	.	+
<i>Salmiopuntia salmiana</i> (Pfeiff.) Guiggi	Cactaceae	N	SA	R	.	.	+
<i>Salpichroa organifolia</i> (Lam.) Baill.	Solanaceae	N	SA	S	.	.	+
<i>Salvia fruticosa</i> Mill.	Lamiaceae	C	ME	R	.	.	+
<i>Salvia hispanica</i> L.	Lamiaceae	C	NA	R	+	+	+
<i>Salvia lavandulifolia</i> Vahl subsp. <i>gallica</i> W. Lippert	Lamiaceae	C	ME	R	.	.	+
<i>Salvia leucantha</i> Cav.	Lamiaceae	C	NA	R	.	.	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Salvia microphylla</i> Kunth	Lamiaceae	C	NA	S	+	+	+
<i>Salvia officinalis</i> L. subsp. <i>officinalis</i>	Lamiaceae	N	ME	S	.	+	+
<i>Salvia sclarea</i> L.	Lamiaceae	N	ME	L	+	+	+
<i>Salvia splendens</i> Roem. & Schult.	Lamiaceae	C	SA	V	.	.	+
<i>Salvia sylvestris</i> L.	Lamiaceae	N	WP	R	+	.	.
<i>Salvia verticillata</i> L.	Lamiaceae	C	WP	R	+	.	+
<i>Santolina chamaecyparissus</i> L.	Asteraceae	C	ME	S	.	.	+
<i>Satureja hortensis</i> L.	Lamiaceae	C	ME	S	.	.	+
<i>Saxifraga stolonifera</i> Curtis	Saxifragaceae	N	AS	R	.	.	+
<i>Schinus molle</i> L.	Anacardiaceae	N	SA	R	.	.	+
<i>Schkuhria pinnata</i> (Lam.) Thell.	Asteraceae	C	SA	R	.	.	+
<i>Scilla hyacinthoides</i> L.	Asparagaceae	N	ME	R	.	+	+
<i>Scilla luciliae</i> (Boiss.) Speta	Asparagaceae	N	WP	R	+	.	.
<i>Scilla peruviana</i> L.	Asparagaceae	C	ME	R	.	.	+
<i>Secale cereale</i> L. subsp. <i>cereale</i>	Poaceae	N	WP	R	+	+	+
<i>Sedum palmeri</i> S. Watson	Crassulaceae	C	NA	R	.	+	+
<i>Sedum praealtum</i> A. DC.	Crassulaceae	N	NA	S	+	+	+
<i>Sedum rubrotinctum</i> R.T. Clausen	Crassulaceae	C	Cult	R	+	.	+
<i>Sedum sarmentosum</i> Bunge	Crassulaceae	N	AS	R	+	.	.
<i>Sedum spathulifolium</i> Hook.	Crassulaceae	C	NA	R	.	.	+
<i>Selaginella kraussiana</i> (L.) Spring.	Selaginellaceae	C	AF	R	.	.	+
<i>Selenicereus grandiflorus</i> (L.) Britton & Rose	Cactaceae	C	SA	R	.	.	+
<i>Senecio angulatus</i> L. f.	Asteraceae	N	CA	C	.	.	+
<i>Senecio crassissimus</i> Humbert	Asteraceae	C	AF	R	.	.	+
<i>Senecio deltoideus</i> Less.	Asteraceae	N	CA	R	.	.	+
<i>Senecio inaequidens</i> DC.	Asteraceae	I	CA	C	+	+	+
<i>Senecio pseudolongifolius</i> J. Calvo	Asteraceae	N	CA	R	.	.	+
<i>Senecio pterophorus</i> DC.	Asteraceae	I	CA	C	.	+	+
<i>Senecio tamoides</i> DC.	Asteraceae	N	CA	R	.	.	+
<i>Senna corymbosa</i> (Lam.) H.S. Irwin & Barneby	Fabaceae	C	SA	R	.	.	+
<i>Senna obtusifolia</i> (L.) H.S. Irwin & Barneby	Fabaceae	C	SA	R	.	+	.
<i>Sesamum indicum</i> L.	Pedaliaceae	C	Cult	R	.	.	+
<i>Sesbania herbacea</i> (Mill.) McVaugh	Fabaceae	C	NA	R	.	+	.
<i>Setaria faberi</i> Herrm.	Poaceae	C	AS	R	.	+	+
<i>Setaria italica</i> (L.) P. Beauv. subsp. <i>italica</i> (L.) Beauv.	Poaceae	N	Cult	S	+	+	+
<i>Setaria parviflora</i> (Poir.) Kerguelen	Poaceae	N	SA	C	.	+	+
<i>Sicyos angulatus</i> L.	Cucurbitaceae	I	NA	L	+	+	+
<i>Sida rhombifolia</i> L.	Malvaceae	C	SA	R	.	.	+
<i>Sida spinosa</i> L.	Malvaceae	N	AS, AF	R	.	+	.
<i>Silene armeria</i> L.	Caryophyllaceae	C	WP	R	+	.	.
<i>Silene coronaria</i> (L.) Clairv.	Caryophyllaceae	I	WP	L	+	+	+
<i>Silene cretica</i> L.	Caryophyllaceae	C	ME	R	.	.	+
<i>Silene dichotoma</i> Ehrh. subsp. <i>dichotoma</i>	Caryophyllaceae	C	WP	V	+	.	.
<i>Silene noctiflora</i> L.	Caryophyllaceae	I	WP	L	+	.	.
<i>Silene pendula</i> L.	Caryophyllaceae	C	ME	R	.	+	+
<i>Silene pseudoatocion</i> Desf.	Caryophyllaceae	N	ME	S	.	+	+
<i>Silene stricta</i> L.	Caryophyllaceae	C	ME	R	.	.	+
<i>Silene viscaria</i> (L.) Jess.	Caryophyllaceae	C	WP	R	+	.	.
<i>Sinapis alba</i> L. subsp. <i>alba</i>	Brassicaceae	C	Cult	R	.	+	+
<i>Sinapis alba</i> L. subsp. <i>mairei</i> (H. Lindb.) Maire	Brassicaceae	N	ME	C	.	+	+
<i>Sinapis arvensis</i> L. subsp. <i>arvensis</i>	Brassicaceae	N	ME	C	+	+	+
<i>Sinapis flexuosa</i> Poir.	Brassicaceae	C	ME	V	.	.	+
<i>Siphonostylis unguicularis</i> (Poir.) Wern. Schulze	Iridaceae	N	ME	R	.	.	+
<i>Sisymbrium altissimum</i> L.	Brassicaceae	N	NA	S	+	.	.
<i>Sisyrinchium platense</i> I.M. Johnst.	Iridaceae	N	SA	R	.	+	.
<i>Solandra maxima</i> (Sessé & Moc.) P.S. Green	Solanaceae	C	SA	R	.	.	+
<i>Solanum bonariense</i> L.	Solanaceae	N	SA	R	.	.	+
<i>Solanum carolinense</i> L.	Solanaceae	N	NA	R	.	.	+
<i>Solanum chenopodioides</i> Lam.	Solanaceae	N	SA	C	.	+	+
<i>Solanum chrysotrichum</i> Schldtl.	Solanaceae	C	SA	R	.	.	+
<i>Solanum elaeagnifolium</i> Cav.	Solanaceae	C	SA	L	.	+	+
<i>Solanum laciniatum</i> Aiton	Solanaceae	C	AU	R	.	.	+
<i>Solanum laxum</i> Spreng.	Solanaceae	C	SA	R	.	.	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Solanum linnaeanum</i> Hepper & P.-M.L. Jaeger	Solanaceae	C	CA	L	.	.	+
<i>Solanum lycopersicum</i> L.	Solanaceae	N	SA	C	+	+	+
<i>Solanum mauritianum</i> Scop.	Solanaceae	N	SA	R	.	.	+
<i>Solanum nitidibaccatum</i> Bitter	Solanaceae	N	SA	R	+	.	.
<i>Solanum pseudocapsicum</i> L.	Solanaceae	C	SA	S	+	+	+
<i>Solanum rostratum</i> Dunal	Solanaceae	C	NA	S	+	+	+
<i>Solanum sisymbriifolium</i> Lam.	Solanaceae	C	SA	R	+	.	+
<i>Solanum tuberosum</i> L.	Solanaceae	C	SA	C	+	+	+
<i>Soleirolia soleirolii</i> (Req.) Dandy	Urticaceae	N	ME	S	.	.	+
<i>Solidago altissima</i> L. subsp. <i>altissima</i>	Asteraceae	I	NA	L	.	.	+
<i>Solidago canadensis</i> L.	Asteraceae	N	NA	C	+	+	+
<i>Solidago gigantea</i> Aiton	Asteraceae	N	NA	R	+	.	+
<i>Soliva sessilis</i> Ruiz & Pav.	Asteraceae	N	SA	R	.	.	+
<i>Sorbaria tomentosa</i> (Lindl.) Rehder	Rosaceae	C	AS	R	+	.	+
<i>Sorghum bicolor</i> (L.) Moench	Poaceae	C	Cult	S	+	+	+
<i>Sorghum halepense</i> (L.) Pers.	Poaceae	I	ME	C	+	+	+
<i>Spinacia oleracea</i> L.	Amaranthaceae	C	Cult	S	+	+	+
<i>Spiraea cantoniensis</i> Lour.	Rosaceae	C	AS	R	+	+	+
<i>Spiraea ×vanhouttei</i> (Briot) Carrière	Rosaceae	C	Cult	R	.	+	.
<i>Sporobolus cryptandrus</i> (Torr.) A. Gray	Poaceae	C	NA	R	.	.	+
<i>Sporobolus indicus</i> (L.) R. Br.	Poaceae	I	SA	C	+	+	+
<i>Sporobolus pumilus</i> (Roth) P.M. Peterson & Saarela	Poaceae	I	NA	L	.	.	+
<i>Sporobolus vaginiflorus</i> (Gray) Alph. Wood	Poaceae	N	NA	R	.	.	+
<i>Stachys byzantina</i> K. Koch	Lamiaceae	C	WP	S	+	+	+
<i>Stenotaphrum secundatum</i> (Walter) Kuntze	Poaceae	N	SA	S	.	.	+
<i>Sternbergia lutea</i> (L.) Spreng.	Amaryllidaceae	N	ME	S	.	+	+
<i>Styphnolobium japonicum</i> (L.) Schott	Fabaceae	C	AS	R	.	+	+
<i>Symphoricarpos albus</i> (L.) S.F. Blake	Caprifoliaceae	N	NA	R	+	.	+
<i>Symphyotrichum lanceolatum</i> (Willd.) G.L. Nesom	Asteraceae	N	NA	L	+	+	?
<i>Symphyotrichum novae-angliae</i> (L.) G.L. Nesom	Asteraceae	C	NA	R	+	.	+
<i>Symphyotrichum pilosum</i> (Willd.) G.L. Nesom	Asteraceae	I	NA	C	+	+	+
<i>Symphyotrichum squamatum</i> (Spreng.) G.L. Nesom	Asteraceae	I	NA	C	+	+	+
<i>Symphyotrichum ×salignum</i> (Willd.) G.L. Nesom	Asteraceae	N	Cult	S	+	+	?
<i>Symphytum officinale</i> L.	Boraginaceae	N	WP	R	+	.	?
<i>Symphytum ×uplandicum</i> Nyman	Boraginaceae	I	Hyb	L	+	+	?
<i>Syringa vulgaris</i> L.	Oleaceae	N	ME	C	+	+	+
<i>Tagetes minuta</i> L.	Asteraceae	N	SA	C	+	+	+
<i>Tagetes patula</i> L.	Asteraceae	C	SA	S	+	.	+
<i>Tagetes terniflora</i> Kunth	Asteraceae	C	SA	V	.	.	+
<i>Tamarix parviflora</i> DC.	Tamaricaceae	C	ME	S	.	.	+
<i>Tamarix ramosissima</i> Ledeb.	Tamaricaceae	C	WP	R	.	.	+
<i>Tanacetum balsamita</i> L.	Asteraceae	C	WP	R	+	.	+
<i>Tanacetum cinerariifolium</i> (Trevir.) Sch. Bip.	Asteraceae	I	ME	L	.	+	+
<i>Tanacetum parthenium</i> (L.) Sch. Bip.	Asteraceae	N	ME	C	+	+	+
<i>Tara spinosa</i> (Feuillée) Britton & Rose	Fabaceae	C	SA	R	.	.	+
<i>Tecoma capensis</i> (Thunb.) Lindl.	Bignoniaceae	C	CA	R	.	.	+
<i>Teucrium fruticans</i> L.	Lamiaceae	C	ME	R	.	.	+
<i>Thlaspi arvense</i> L.	Brassicaceae	N	WP	C	+	+	+
<i>Thymus mastichina</i> (L.) L. subsp. <i>mastichina</i>	Lamiaceae	C	ME	R	.	?	+
<i>Tilia tomentosa</i> Moench	Malvaceae	C	WP	R	.	+	.
<i>Tipuana tipu</i> (Benth.) Kuntze	Fabaceae	C	SA	R	.	.	+
<i>Trachycarpus fortunei</i> (Hook.) H. Wendl.	Arecaceae	N	AS	R	.	+	+
<i>Tradescantia fluminensis</i> Vell.	Commelinaceae	I	SA	L	+	.	+
<i>Tradescantia pallida</i> (Rose) D.R. Hunt	Commelinaceae	C	SA	R	.	+	+
<i>Tradescantia sillamontana</i> Matuda	Commelinaceae	C	NA	R	.	.	+
<i>Tradescantia zebrina</i> Bosse	Commelinaceae	C	SA	R	.	.	+
<i>Tragopogon porrifolius</i> L. subsp. <i>eriospermus</i> (Ten.) Greuter	Asteraceae	C	Cult	R	.	+	+
<i>Tribulus terrestris</i> L.	Zygophyllaceae	N	ME	C	+	+	+
<i>Trichloris crinita</i> (Lag.) Parodi	Poaceae	N	NA, SA	R	.	.	+
<i>Trichocereus macrogonus</i> (Salm-Dyck) Riccob.	Cactaceae	C	SA	R	.	.	+
<i>Trichocereus schickendantzii</i> (F.A.C. Weber) Britton & Rose	Cactaceae	C	SA	R	.	+	.
subsp. <i>schickendantzii</i>							
<i>Trichocereus spachianus</i> (Lem.) Riccob.	Cactaceae	C	SA	R	.	+	+
<i>Trichocereus taquimbalensis</i> Cárdenas	Cactaceae	C	SA	R	.	.	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Tricyrtis hirta</i> (Thunb.) Hook	Liliaceae	C	AS	R	.	.	+
<i>Trifolium alexandrinum</i> L.	Fabaceae	C	Cult	R	.	.	+
<i>Trifolium incarnatum</i> L. subsp. <i>incarnatum</i>	Fabaceae	N	WP	L	+	.	+
<i>Trifolium vesiculosum</i> Savi	Fabaceae	C	ME	R	.	.	+
<i>Trigonella foenum-graecum</i> L.	Fabaceae	C	ME	S	+	+	+
<i>Trigonella procumbens</i> (Besser) Rchb.	Fabaceae	C	ME	V	.	.	+
<i>Tristagma uniflorum</i> (Lindl.) Traub.	Amaryllidaceae	C	SA	R	.	.	+
<i>Triticum aestivum</i> L. subsp. <i>aestivum</i>	Poaceae	C	Cult	S	+	+	+
<i>Triticum turgidum</i> L. subsp. <i>durum</i> (Desf.) Husn.	Poaceae	C	Cult	S	+	+	+
<i>Triticum turgidum</i> L. subsp. <i>turgidum</i>	Poaceae	C	Cult	R	+	.	+
<i>Tropaeolum majus</i> L.	Tropaeolaceae	N	SA	S	.	.	+
<i>Tulipa clusiana</i> DC.	Liliaceae	N	ME	V	+	+	+
<i>Tulipa fosteriana</i> W. Irving	Liliaceae	C	WP	R	+	.	.
<i>Tulipa × gesneriana</i> L.	Liliaceae	C	WP	R	+	+	+
<i>Ulex europaeus</i> L. subsp. <i>europaeus</i>	Fabaceae	N	WP	R	?	.	+
<i>Ulmus laevis</i> Pall.	Ulmaceae	N	WP	R	+	.	+
<i>Ulmus pumila</i> L.	Ulmaceae	N	AS	L	+	+	+
<i>Ursinia nana</i> DC. subsp. <i>nana</i>	Asteraceae	N	CA	R	.	.	+
<i>Vaccaria hispanica</i> (Mill.) Rauschert	Caryophyllaceae	N	ME	L	+	+	+
<i>Vachellia caven</i> (Molina) Seigler & Ebinger	Fabaceae	C	SA	R	.	.	+
<i>Vachellia farnesiana</i> (L.) Wight & Arn.	Fabaceae	C	SA	R	.	.	+
<i>Vachellia karroo</i> (Hayne) Banfi & Galasso	Fabaceae	N	AF	R	.	.	+
<i>Verbena bonariensis</i> L.	Verbenaceae	C	SA	R	.	+	+
<i>Verbena brasiliensis</i> Vell.	Verbenaceae	N	SA	S	.	.	+
<i>Verbena incompta</i> P.W. Michael	Verbenaceae	N	SA	R	.	.	+
<i>Veronica filiformis</i> Sm.	Plantaginaceae	C	WP	V	.	.	+
<i>Veronica longifolia</i> L.	Plantaginaceae	C	WP	R	+	.	.
<i>Veronica peregrina</i> L. subsp. <i>peregrina</i>	Plantaginaceae	N	NA	L	+	.	+
<i>Veronica persica</i> Poir.	Plantaginaceae	N	WP	C	+	+	+
<i>Veronica triphyllos</i> L.	Plantaginaceae	N	WP	C	+	.	.
<i>Viburnum odoratissimum</i> Ker-Gawl.	Adoxaceae	C	AS	R	.	.	+
<i>Vicia faba</i> L.	Fabaceae	C	Cult	S	+	+	+
<i>Vicia lens</i> (L.) Coss. & Germ. subsp. <i>lens</i>	Fabaceae	C	Cult	R	.	+	+
<i>Vicia melanops</i> Sibth. & Sm.	Fabaceae	N	ME	L	.	.	+
<i>Vicia narbonensis</i> L.	Fabaceae	N	ME	S	.	+	+
<i>Vicia pannonica</i> Crantz subsp. <i>pannonica</i>	Fabaceae	C	WP	R	+	+	+
<i>Vicia pannonica</i> Crantz subsp. <i>striata</i> (M. Bieb.) Ponert	Fabaceae	N	WP	C	+	+	+
<i>Vicia sativa</i> L. subsp. <i>macrocarpa</i> (Moris) Arcang.	Fabaceae	N	ME	R	.	.	+
<i>Vicia sativa</i> L. subsp. <i>sativa</i>	Fabaceae	N	Cult	C	+	+	+
<i>Vicia serratifolia</i> Jacq.	Fabaceae	C	ME	V	.	.	+
<i>Vicia villosa</i> Roth	Fabaceae	C	WP	S	+	+	+
<i>Viola arvensis</i> Murray	Violaceae	N	ME	C	+	+	+
<i>Viola tricolor</i> L. subsp. <i>tricolor</i>	Violaceae	C	WP	R	+	.	.
<i>Viola × witrockiana</i> Gams	Violaceae	C	Cult	R	.	.	+
<i>Visnaga daucooides</i> Gaertn.	Apiaceae	N	ME	C	.	+	+
<i>Vitis acerifolia</i> Raf. × <i>V. riparia</i>	Vitaceae	N	Cult	S	.	.	+
<i>Vitis berlandieri</i> Planch. × <i>V. vinifera</i>	Vitaceae	C	Cult	R	.	+	.
<i>Vitis labrusca</i> L.	Vitaceae	C	NA	R	+	.	+
<i>Vitis riparia</i> Michx.	Vitaceae	I	NA	L	+	+	+
<i>Vitis rupestris</i> Scheele	Vitaceae	N	NA	C	+	+	+
<i>Vitis vinifera</i> L. subsp. <i>vinifera</i>	Vitaceae	C	Cult	S	+	+	+
<i>Vitis × baco</i> i Ardenghi, Galasso, Banfi & Lastrucci	Vitaceae	C	Cult	R	+	.	.
<i>Vitis × goliath</i> Ardenghi, Galasso & Banfi	Vitaceae	N	Cult	R	.	+	+
<i>Vitis × instabilis</i> Ardenghi, Galasso, Banfi & Lastrucci	Vitaceae	N	Cult	L	+	+	+
<i>Vitis × koberi</i> Ardenghi, Galasso & Banfi	Vitaceae	N	Cult	S	+	+	+
<i>Vitis × ruggeri</i> Ardenghi, Galasso, Banfi & Lastrucci	Vitaceae	C	Cult	R	+	.	+
<i>Volutaria tubuliflora</i> (Murb.) Sennen	Asteraceae	C	ME	R	.	.	+
<i>Washingtonia filifera</i> (André) de Bary	Arecaceae	C	NA	S	.	.	+
<i>Watsonia borbonica</i> (Pourr.) Goldblatt	Iridaceae	N	CA	R	.	.	+
<i>Westringia fruticosa</i> (Willd.) Druce	Lamiaceae	C	AU	R	.	.	+
<i>Wigandia urens</i> (Ruiz & Pav.) Kunth	Boraginaceae	C	SA	R	.	.	+
<i>Wisteria sinensis</i> (Sims) Sweet	Fabaceae	C	AS	R	.	.	+
<i>Xanthium orientale</i> L.	Asteraceae	I	NA, SA	C	+	+	+

Scientific name	Family	Nat. D.	Origin	Abun.	Regional Distribution		
					Pyr.	In	Lit
<i>Xanthium spinosum</i> L.	Asteraceae	N	SA	C	+	+	+
<i>Xeranthemum annuum</i> L.	Asteraceae	N	WP	V	+	+	+
<i>Youngia japonica</i> (L.) DC.	Asteraceae	C	AS	R	.	.	+
<i>Yucca aloifolia</i> L.	Asparagaceae	N	NA	S	.	.	+
<i>Yucca gigantea</i> Lem.	Asparagaceae	C	SA	S	.	.	+
<i>Yucca gloriosa</i> L.	Asparagaceae	N	NA	C	+	+	+
<i>Zantedeschia aethiopica</i> (L.) Spreng.	Araceae	N	CA	S	.	.	+
<i>Zea mays</i> L. subsp. <i>mays</i>	Poaceae	C	Cult	C	+	+	+
<i>Zea mays</i> L. subsp. <i>mexicana</i> (Schrad.) Iltis	Poaceae	N	NA	L	.	+	.
<i>Zephyranthes candida</i> (Lindl.) Herb.	Amaryllidaceae	C	SA	R	.	.	+
<i>Ziziphus jujuba</i> Mill.	Rhamnaceae	N	WP	L	+	+	+
<i>Zygophyllum fabago</i> L.	Zygophyllaceae	N	ME	S	.	+	+

Supplementary Material

Table S1. Checklist of the Catalanian

vascular alien flora. Data are presented in the table with the following information fields: taxon (arranged alphabetically, incl. hybrid taxa, which are also organized alphabetically); family; residence time (1: Before 1500 AD; 2: Between 1500 and 1900 AD; 3: Between 1900 and 1970 AD; 4: After 1970 AD); introduction pathway (A: Agriculture; G: Gardening; F: Forestry; T: Trade) and intentionality of introduction (A: accidental; D: deliberate).